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Please note that elective courses listed will only be offered if there is sufficient student interest.
GRADUATION REQUIREMENTS

Upper School students may receive a diploma by completing four years of secondary education, of which at least the senior year must be at the School. All academic courses taken during all four years must be successfully completed. Seniors who fail a core course for graduation must attend summer school at Pine Crest prior to receiving a diploma. At least 24 credits must be earned during the four years, grades nine through twelve, and the following minimum requirements met:

<table>
<thead>
<tr>
<th>REQUIREMENT</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>Four credits in Upper School</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Four credits in Upper School</td>
</tr>
<tr>
<td>World Languages</td>
<td>Three credits over three years in the same language in the Upper School,</td>
</tr>
<tr>
<td></td>
<td>four years recommended</td>
</tr>
<tr>
<td>Science</td>
<td>Three credits, two of which will be chemistry and biology; four years</td>
</tr>
<tr>
<td></td>
<td>recommended</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>Three credits over three years, including a Global History course, United</td>
</tr>
<tr>
<td></td>
<td>States History, and one elective course</td>
</tr>
<tr>
<td>Humanities</td>
<td>One-half credit fulfilled by the required course for freshmen, Great</td>
</tr>
<tr>
<td></td>
<td>Decisions, Character, and Consequences</td>
</tr>
<tr>
<td>Arts</td>
<td>One credit from Digital Media, Performing, or Visual Arts</td>
</tr>
<tr>
<td>Physical Education</td>
<td>One credit (two semesters)</td>
</tr>
<tr>
<td>Health</td>
<td>One-half credit completed in grade nine</td>
</tr>
<tr>
<td>Electives</td>
<td>Four credits of electives; electives may be course work beyond the core</td>
</tr>
<tr>
<td></td>
<td>subject requirements and/or additional fine/performing arts course work*</td>
</tr>
</tbody>
</table>

* Four credits of electives; electives may be course work beyond the core subject requirements and/or additional fine/performing arts course work.
The Pine Crest English curriculum fosters the development of accomplished readers, writers, and thinkers in collegial settings through student-centered learning. Department offerings provide an environment for lively discussions in which students analyze challenging literature and articulate their thoughts with confidence. All classes incorporate the use of technology including internet-based research, creation of web pages, interactive SmartBoard activities, online reading, and PSAT, SAT, and AP preparations. Four English credits are required for graduation: Students who satisfy department prerequisites may elect to take Honors or Advanced Placement courses. All students enrolled in Advanced Placement courses will take the Advanced Placement Examinations for those courses.

GRADE 9 OFFERINGS

ENGLISH I
Full Year – One Credit

Through a survey of world literature focusing on selected readings from a variety of cultures, students complete an in-depth study of short stories, nonfiction, novels, drama, and poetry as a foundation for the more advanced levels of the English curriculum. Students develop mastery of a variety of rhetorical modes of writing through the production of analytical, narrative, persuasive, expository, and comparative essays. Vocabulary exercises focus on PSAT preparation and connotative word usage. Formalized grammar instruction is combined with applied skills through writing and editing assignments. Continuing to develop and improve reading comprehension skills is also an important component of the course.

ENGLISH I HONORS
Full Year – One Credit

English Honors is designed to develop students’ abilities to think, organize, and express ideas clearly and effectively through the study of world literature. This course incorporates reading, writing, critical thinking, vocabulary, and grammar study. Writing includes description, narration, comparison, analysis, and persuasion. Numerous in-class writing activities are required in addition to extended essays written both inside and outside of class. Vocabulary exercises focus on PSAT preparation and connotative word usage. Students will strengthen their reading, written and oral communication skills, and increase their ability to comprehend and analyze works of literature, both classics and modern.

Prerequisite: Dean/Department Approval
GRADE 10 OFFERINGS:

ENGLISH II
FULL YEAR – ONE CREDIT

American Literature helps to develop students’ understanding of the culture and history of our country. Students share in the ideas and experiences of American authors from the Puritans to Modern Literature. Students analyze the progression of literature by exploring the customs and ideas of each period through the eyes of the author. They will continue to develop the ability to think, organize, and express their ideas clearly and effectively in a variety of ways. This course incorporates reading writing, critical thinking, vocabulary study, and grammar study. Vocabulary exercises focus on PSAT preparation and connotative word usage. Various forms of writing are included such as description, narration, comparison, analysis, persuasion, and argumentation. Numerous in-class writing activities and presentations are required in addition to essays written outside of the class.
Prerequisite: English I

ENGLISH II HONORS
FULL YEAR – ONE CREDIT

Students survey American literature from William Bradford to John Updike with special interest in the development of American language. Literary analysis, advanced composition, reading comprehension drills, and MLA research are correlated with the Social Science curriculum. Students work extensively on timed expository and persuasive essays with a focus on development of voice in their writing. Vocabulary exercises and PSAT preparation involve learning words in context and understanding etymology.
Prerequisite: Dean/Department Approval

ENGLISH LANGUAGE AND COMPOSITION AP
FULL YEAR – ONE CREDIT

AP English Language and Composition is a college-level course that engages students in becoming skilled readers of prose written in a variety of periods, disciplines, and rhetorical contexts, and in becoming accomplished writers who compose for a variety of purposes. During the year, students study several modes of discourse including letters, speeches, essays, biographies, newspaper articles, literary criticism, legal documents, and academic research. They gain experience both responding to and writing personal, argumentative, expository, and analytical prose. Authors studied range from classical essayists such as Francis Bacon and Michel de Montaigne to contemporary literary journalists including Tom Wolfe, John McPhee, and Joan Didion. Although the course is largely non-fiction based, it encompasses selected readings from fictional literature. Students also emerge from this course conversant in a variety of state, local, and international current-events issues. The course prepares students to write the AP English Language and Composition exam.
ENGLISH

GRADE 11 OFFERINGS:

ENGLISH III HONORS
FULL YEAR – ONE CREDIT

Students use literature as subject matter for analytical, interpretive essays and documented MLA-style papers as well as oral presentations and class discussions. British poetry and prose, along with some drama, are the basis for the survey of British literature, as well as its themes from heroism and tragedy – to love and death – to identity and existentialism. Students write personal essays, comparison-contrast essays, and documented MLA-style research papers. They make oral presentations and participate in class discussions. The study of syntax, diction, and grammar aids the students in literature analysis, reading comprehension, and composition.

Prerequisite: English II

ENGLISH LANGUAGE AND COMPOSITION AP
FULL YEAR – ONE CREDIT

AP English Language and Composition is a college-level course that engages students in becoming skilled readers of prose written in a variety of periods, disciplines, and rhetorical contexts, and in becoming accomplished writers who compose for a variety of purposes. During the year, students study several modes of discourse including letters, speeches, essays, biographies, newspaper articles, literary criticism, legal documents, and academic research. They gain experience both responding to and writing personal, argumentative, expository, and analytical prose. Authors studied range from classical essayists such as Francis Bacon and Michel de Montaigne to contemporary literary journalists including Tom Wolfe, John McPhee, and Joan Didion. Although the course is largely non-fiction based, it encompasses selected readings from fictional literature. Students also emerge from this course conversant in a variety of state, local, and international current-events issues. The course prepares students to write the AP English Language and Composition exam.

Prerequisite: Dean/Department Approval

ENGLISH LITERATURE AND COMPOSITION AP
FULL YEAR – ONE CREDIT

Starting with nonfiction and the personal essay, this college-level course provides a thematic study of all genres of British, American, and world literature beginning with the Book of Job and finishing with the modern works of Toni Morrison and Tim O’Brien. Students enhance their skills in writing, thinking, and discussing through research and analysis of literature, authors, writing styles and elements. The course prepares students to write the AP English Literature and Composition exam.

Prerequisite: English Language and Composition AP and Dean/Department Approval
GRADE 12 OFFERINGS:

**ENGLISH LANGUAGE AND COMPOSITION AP**

**Full Year – One Credit**

AP English Language and Composition is a college-level course that engages students in becoming skilled readers of prose written in a variety of periods, disciplines, and rhetorical contexts, and in becoming accomplished writers who compose for a variety of purposes. During the year, students study several modes of discourse including letters, speeches, essays, biographies, newspaper articles, literary criticism, legal documents, and academic research. They gain experience both responding to and writing personal, argumentative, expository, and analytical prose. Authors studied range from classical essayists such as Francis Bacon and Michel de Montaigne to contemporary literary journalists including Tom Wolfe, John McPhee, and Joan Didion. Although the course is largely non-fiction based, it encompasses selected readings from fictional literature. Students also emerge from this course conversant in a variety of state, local, and international current-events issues. The course prepares students to write the AP English Language and Composition exam.

**ENGLISH LITERATURE AND COMPOSITION AP**

**Full Year – One Credit**

Starting with nonfiction and the personal essay, this college-level course provides a thematic study of all genres of British, American, and world literature beginning with the Book of Job and finishing with the modern works of Toni Morrison and Tim O’Brien. Students enhance their skills in writing, thinking, and discussing through research and analysis of literature, authors, writing styles and elements. The course prepares students to write the AP English Literature and Composition exam.  
*Prerequisite: English Language and Composition AP*

**CONTEMPORARY FICTION POST-AP**

**Full Year – One Credit**

This is a senior level post-AP course that focuses on contemporary authors from around the world. Readings will be comprised of both fiction and nonfiction, from post-World War II to the present day. The course will address social and cultural issues, as well as questions of identity in a rapidly changing global society. In addition to collaborative discussion, the course will include extended independent research. Required readings include: The House of the Spirits, Waiting for Godot, The Beauty Queen of Leenane trilogy, Midnight’s Children, Lolita, The Road, Zeitoun, Middlesex, and David and Goliath. Students will complete three 4,000 word research papers based on the readings. All research will be performed independently, and all research topics are student generated.  
*Prerequisite: English Language AP and English Literature AP*
CONTEMPORARY NON-FICTION POST-AP
FULL YEAR – ONE CREDIT

This course will encompass the compelling body of current non-fiction writing that addresses the rapidly changing cultural, economic, and environmental worldview during the Post-Modern period from WWII to present-day. Students will read renowned non-fiction prose writers who capture the essence of trends, breakthroughs, and anxieties of the digital age, and offer thoughtful commentary on the man-made and natural forces that directly impact us today. Students will have the opportunity to write critically about current non-fiction in many genres (cultural trends/technology, environment, science, economics, history and biography). Readings include The Seventh Sense: Power, Fortune, and Survival in the Age of Networks, David and Goliath, Consider the Lobster, The Sixth Extinction, Lost on Planet China, Zero to One, Love and Other Ways of Dying: Essays, Midnight in Broad Daylight, Hiroshima, and Hidden Figures, as well as selections from The New York Times Sunday Magazine, The Atlantic Monthly, and The New Yorker, as well as to produce extended non-fiction prose of their own.
Prerequisite: English Language AP and English Literature AP

SHAKESPEARE POST-AP
FULL YEAR – ONE CREDIT

This course explores the phenomenon of the canon of William Shakespeare on stage and in film. The first semester focuses on Shakespeare, the playwright; therefore, the emphasis of the textual analysis will be on the rhetorical strategies employed in the play in conjunction with the plays’ dramatic structure. Students will spend some time researching critical interpretations and each play’s cultural history to help us make decisions about how to stage or film the work. But, the primary focus will be on the text as a “blueprint” for performance. Students will explore poetry and rhythm, imagery, and structure and will make use of tools such as scansion to understand the verse. Students will examine each scene from a theatrical and/or film point of view, exploring structure, action, events, reversals, and ways of staging/filming that will bring it to life. The second semester focuses entirely on a full scale film production of a Shakespearean play “reinvented.” This will allow students a project based learning approach to the actualization of a text in a different cultural and historical moment. In addition, students will consider authorship, adaptation, the role of Shakespeare in contemporary film/stage (specifically the politics of race and gender) and how film becomes a compelling medium to tell the same story.
Prerequisite: English Language AP and English Literature AP

WORLD LITERATURE POST-AP
FULL YEAR – ONE CREDIT

This is a senior-level post-AP course. Individual research projects culminating in a major documented paper and verbal presentations each quarter complement in-class instruction of core required readings representing canonical works from world literature in a chronological sequence. In addition to the required readings, students are encouraged to explore voices from diverse cultures beyond the Western Canon. The primary focus is to develop skills in rhetorical analysis, close reading, literary interpretation and modes of literary criticism, synthesis of information from multiple sources, cogent written composition, and effective verbal communication. Students are encouraged to formulate independent conclusions regarding an author’s work based on their research and analysis. The in-class instruction centers on the close study of major works in each designated time period. Classes are conducted in the Harkness-style discussion format. Students are expected to arrive each day having read the text under discussion. Students are encouraged to thoroughly annotate their readings in order to effectively and fully participate in class discussion on a daily basis. Texts include works from Aeschylus, Aristophanes, Sophocles, Dante, Shakespeare, and Smiley.
Prerequisite: English Language AP and English Literature AP; Dean/Department Approval
At its core, mathematics is the study of patterns and relationships. Its elegance stems from fundamental arithmetic principles and extends logically to more complex investigations of real-world phenomena. The department aims to inspire its students with an appreciation for mathematical analysis. The curriculum builds both vertically in terms of skills, and horizontally in terms of applications. The flexible yet rigorous curriculum is individually tailored to accommodate each student’s unique talents and goals. Using a variety of pedagogical approaches that merge time-tested methods with modern technological enhancements, teachers provide an effective learning experience. Students gradually acquire the skills and intuition necessary to solve problems, analyze data, manipulate graphs, and reason abstractly. Ultimately, students graduate from the math program with proficiency, creativity and confidence that extend far beyond the preconceived boundaries of mathematics.

Computer science courses are designed to teach high-level logic and problem-solving skills that prepare students for successful entry into the technological and/or scientific environments of academia and work. The department is dedicated to providing a state-of-the-art curriculum in an ever-evolving discipline.

Four credits of mathematics in high school are required for graduation. At minimum, graduation requirements include Algebra I, Algebra II, and Geometry. All students enrolled in Advanced Placement courses will take the Advanced Placement Examinations for those courses.

MATHEMATICS

ALGEBRA I
FULL YEAR – ONE CREDIT

The Algebra I curriculum focuses on problem-solving and equation-solving strategies. The use of variables as well as the meaning, representation and use of functions is fundamental to the understanding of algebra. Essential units of study include, but are not limited to, relationships between quantities and reasoning with equations, linear and exponential relationships, descriptive statistics, expressions and equations, and modeling with quadratic functions. These units deepen and extend students’ understanding of linear, exponential and quadratic relationships by contrasting them with each other and by applying these models to data used in authentic scenarios. Students who successfully complete this course are prepared to take Algebra II.

Prerequisite: Pre-Algebra

ALGEBRA II
FULL YEAR – ONE CREDIT

Algebra II is designed to build upon the algebraic and geometric concepts learned in previous mathematical studies. Students continue to expand their abilities to model authentic situations and solve equations and systems of equations that include quadratic, exponential, polynomial, absolute value and rational functions. Number systems are expanded to the set of complex numbers in this course of study. Additionally, students continue to explore geometry by learning about conic sections. Students who successfully complete this course are prepared to take Geometry.

Prerequisite: Algebra I
ALGEBRA II HONORS
Full Year – One Credit

Students enrolled in this rigorous course should have demonstrated Algebra I Honors proficiency. Building on their work with linear, quadratic, and exponential functions, students extend their repertoire of functions. Topics include but are not limited to theory, applications and modeling of linear, polynomial, rational, radical, exponential, logarithmic, and trigonometric functions. Our studies will enable students to further develop problem-solving skills, while fostering critical thinking, which will help students acquire a solid foundation in algebra and trigonometry. The content of the course is anchored in real world context with the use of a graphing utility, which is integral to our explorations. Students who have successfully completed this course are prepared to take Geometry Honors.
Prerequisite: Algebra I Honors or Dean/Department Approval

GEOMETRY
Full Year – One Credit

This course provides students with their first learning experience involving a formal theorem-based mathematical system. Topics will include, but not be limited to the study of the two-dimensional and three-dimensional Euclidean geometry of lines, planes, and triangles, similarity, congruence, geometric inequalities, polygons, circles, areas, volumes, transformations, symmetry and trigonometry. Students develop skills in deductive and inductive analytical thinking with an emphasis placed on problem-solving and justifying solutions by using key geometric theorems, postulates and definitions. Algebraic skills learned in Algebra II the previous school year continue to be reinforced throughout this course.
Prerequisite: Algebra II

GEOMETRY HONORS
Full Year – One Credit

This course focuses on building student understanding of essential geometric principles while developing deductive and inductive reasoning and analytical skills. Emphasis is placed on creating formal mathematical proofs to justify solutions to problems that are based on geometric theorems, postulates and definitions. Topics will include but not be limited to the study of the two-dimensional and three-dimensional Euclidean geometry of lines, planes, triangles, similarity, congruence, geometric inequalities, polygons, circles, areas, volumes, transformations, symmetry, and trigonometry. This course also reinforces critical algebraic concepts that were learned the previous school year in Algebra II Honors.
Prerequisite: Algebra II Honors or Dean/Department Approval
PRE-CALCULUS  
FULL YEAR – ONE CREDIT

This course is an extension of students’ previous knowledge of the real and complex number systems. It is a comprehensive study of advanced topics in algebra such as exponential, logarithmic, polynomial and rational functions in addition to a thorough coverage of trigonometry. Much work is done with the graphing calculator to help connect algebraic and geometric concepts. Students learn to graph relations and functions with and without the use of a graphing utility.

Prerequisite: Geometry

PRE-CALCULUS HONORS  
FULL YEAR – ONE CREDIT

This course is essential in preparing students for their future studies in calculus. Students learn how to study functions analytically, graphically and numerically. Topics covered in this course include, but are not limited to analyses of functions including symmetry, transformations, compositions, as well as finding inverses of functions. Rational functions are explored from an analytical and graphical approach as well, with emphasis placed on asymptotic behavior within the context of limits. Trigonometry is covered through a graphical, analytic and applied approach for all trigonometric and inverse trigonometric functions. Additional topics covered in this curriculum include sequences and series, vectors and their applications, analytic geometry (conic sections, polar graphs and equations, parametric equations), logarithmic and exponential functions and an introduction to limits. All topics in this course are explored with and without the use of a graphing utility.

Prerequisite: Geometry Honors with emphasis on Algebra II Honors performance or Dean/Department Approval

CALCULUS I HONORS  
FULL YEAR – ONE CREDIT

The purpose of this course is to reinforce topics learned in Pre-Calculus that are prerequisite for the understanding of calculus and to then cover the fundamentals of calculus ranging from differential calculus through integral calculus. Specific topics include but are not limited to the analysis of functions and their graphs through limits, asymptotic behavior and continuity. Differential calculus includes techniques of differentiation and using first and second derivatives to analyze the behaviors of functions. Integral calculus includes techniques of integration, finding definite and indefinite integrals as well as applications of integration. Numerical approximations (Riemann Sums) are also investigated in this unit. The use of graphing technology is incorporated in the course with the Texas Instruments TI-Nspire CAS graphing emulator used for demonstrations.

Prerequisite: Pre-Calculus
STATISTICS AP
FULL YEAR – ONE CREDIT

The purpose of the AP course in Statistics is to introduce students to the major concepts and tools for collecting, analyzing and drawing conclusions from data. The topics for AP Statistics are divided into four major themes - Exploratory Data Analysis, Observational Studies and Experiments, Exploratory study of random phenomena using probability and Simulation and Statistical inference. Students explore challenging topics through tactile activities that promote the observation of random behaviors. A variety of manipulatives such as MandMs, beads, thumbtacks, dice, pennies, etc. aid in the demonstration of inference for proportions, conditions for inference, probability (e.g. the Law of Large Numbers), sampling distributions, the Central Limit Theorem, and many other topics. Course projects and investigative tasks encourage proper data gathering techniques, analysis and communication of interpreted results using appropriate statistical terms. Students use technology, such as a graphing calculator, Internet applets, computer software and the SmartBoard, to analyze data. All students who take this course write the Advanced Placement Exam for this course.

Prerequisite: Pre-Calculus

CALCULUS AB AP
FULL YEAR – ONE CREDIT

The purpose of this rigorous course is to cover the comprehensive content of Advanced Placement Calculus as detailed in the College Board’s Advanced Placement Calculus AB Course Description. Students are taught to understand concepts by analyzing functions graphically, numerically, analytically and verbally. The three major topics of study in this course include but are not limited to analysis of functions, differential calculus and integral calculus. The analysis of functions and their graphs investigates limits (including one-sided limits), asymptotic and unbounded behavior, and continuity as a property of functions. The study of differential calculus includes the concept of the derivative, techniques and computation of differentiation, the derivative at a point, the derivative as a function, second derivatives and applications of derivatives. Integral calculus includes techniques of integration, interpretations and properties of definite and indefinite integrals, applications of integrals, the Fundamental Theorem of Calculus, numerical approximations to integrals (Riemann Sums, Trapezoidal Sums and Trapezoidal Rule) and slope fields. Unifying themes are incorporated to bring these topics together as an interconnected whole. Students who complete this course take the Advanced Placement exam at the end of the school year. The use of graphing technology is integral to the course with the Texas Instruments TI-CAS Graphing Emulator used for demonstrations. Successful completion of this course prepares students for Advanced Placement Calculus BC.

Prerequisite: Pre-Calculus Honors or Dean/Department Approval
CALCULUS BC AP  
FULL YEAR – ONE CREDIT

The purpose of this course is to continue the study of calculus after having successfully completed Advanced Placement Calculus AB. Students are taught to understand concepts related to functions and planar curves by analyzing these functions and curves graphically, numerically, analytically and verbally. Topics in this course include, but are not limited to the continued study of limits, including L’Hopital’s Rule, analysis of planar curves (area, arc length and surface area of solids of revolution) in parametric, polar and vector form, differentiation and applications of derivatives, differential equations and techniques of anti-differentiation, specifically including integration by parts, partial fractions and improper integrals. Also included are applications of anti-differentiation, numerical approximations including Euler’s Method, and polynomial approximations and series, including Taylor and Maclaurin Series. The use of graphing technology is integral to the course with the Texas Instruments TI-Nspire CAS Graphing Emulator used for demonstrations.

Prerequisite: Calculus AB AP

MULTIVARIABLE CALCULUS POST-AP  
FULL YEAR – ONE CREDIT

This course studies advanced material involving the application of calculus techniques to problems in more than one variable, with the use of Matlab software as a tool for problem solving and enhancing understanding. Material covered during the first semester includes vectors in a plane and space, cylindrical and spherical coordinate systems, vector-valued functions, limits and continuity of functions in several variables, partial derivatives, multiple integrals, vector fields, conservative fields, and Green’s and Stokes’s Theorem. The second semester will be devoted to a project of the student’s choice that will incorporate mathematical techniques mastered during the first semester. Students will conduct research on their selected topic and solve an identified problem, using multivariable calculus and then present their findings in a written report and orally.

Prerequisite: Calculus BC AP

COMPUTER SCIENCE

COMPUTER SCIENCE PRINCIPLES AP  
Full Year – One Credit

Computer Science Principles course introduces students to the essential ideas of computer science and helps them understand how computing and technology can influence the world around them. As part of this course, students will be exposed to a broad range of computing tools and skills while creatively addressing real-world issues and concerns. Students will pursue their interests in digital projects – like apps, films, games or music – that showcase creativity, and use their creations to make a difference in our community.
MATHEMATICS/COMPUTER SCIENCE

COMPUTER SCIENCE A AP
FULL YEAR – ONE CREDIT

This course builds upon the concepts learned in an introductory Computer Science course with a goal of designing and implementing solutions to problems by writing, running and debugging computer programs. Additional goals include but are not limited to, coding fluently in Java with familiarization of the Java library classes from the AP Java subset, and reading and understanding a large program consisting of several classes and interacting objects. Advanced topics include: Encapsulation, Inheritance and Composition, Dynamic and Two-Dimensional Arrays, Boolean Logic and Control Structures, Program Analysis, Polymorphism, Strings and Redefining Methods, Sequential Files, Algorithms, and Recursion. All students take the Advanced Placement examination and are expected to participate in the ACSL (American Computer Science League) competition, among other computer science competitions.
Prerequisite: Computer Science Principles AP; Dean/Department Approval

DATA STRUCTURES POST-AP
FULL YEAR - ONE CREDIT

This course extends the students’ computer science knowledge by focusing on data structures and algorithms. Specific topics include Stacks, Queues, Recursion, Trees (Selection, Insertion, Bubble, Quicksort, Merge, Sort), heaps, and hash tables. Programming assignments allow students to use advanced object-oriented methodologies to write complex and dynamic programs. Many of these concepts are taught through a project-based learning environment where students are responsible for planning, implementing, testing and submitting advanced-level programs. The Raspberry Pi computer is used to explore electronic projects. Additionally, participation in the national ACSL competition is a requirement of the course.
Prerequisite: Computer Science A AP; Dean/Department Approval

OPERATING SYSTEMS POST-AP
FULL YEAR - ONE CREDIT

Operating Systems is designed as an advanced-level computer science class and is structured as a project-based learning experience. Students work on semester-long projects involving system applications and are required to submit proposals with specifications for needs, scope, system requirements, constraints and expected functionality of their project. These may be implemented on various operating systems platforms, including Microsoft Windows, OSX, Linux, iOS or Android. Documentation and verification of a working model of the system is fulfilled by submitting written reports, one-on-one interviews and field testing of models. All students are expected to participate in the ACSL (American Computer Science League) competition, as well as other computer science competitions.
Prerequisite: Data Structures Post AP; Dean/Department Approval
Mathematics/Computer Science

Electives

Engineering Design

Full Year – One Credit

Engineering Design Honors is an innovative, honors-level engineering course to introduce students to collaborative project-based, hands-on learning using engineering design concepts that provide students an in-depth look at the design process of the major disciplines of engineering. The primary topics in this course include but are not limited to: structural design and site development, electrical and circuit design, robotics and automation, and product design. Students will learn how to document their work, learn different forms of sketching, such as isometric and multi-view sketches to conceive their ideas, and model their designs on software such as AutoCAD, industry 3D software, building design software, and programming software for robotics. Students will be able to realize their product design to the final stage by producing an actual prototype on a 3D rapid prototyping machine. Another important and practical component of the course is the incorporation of the Architecture Construction Engineering (ACE) Mentor Program where the students work alongside professional engineers on real-life projects. Students will also have opportunities to participate in robotics and other STEM-related competitions.
Prerequisite: Grade Ten Standing

Robotics

Full Year – One Credit

This mechatronics** related course provides hands-on experience in robot design, engineering, electronics, and computer science. Students will engage in the engineering process, conduct research, design, build, and test ideas. Throughout the course, students will learn to use a microcomputer to control output devices and interpret input sensors. As a final project, students will create a robot, document the design process in an engineering notebook using 3D modeling software, and create a team video. Working as a team, enrolled students will participate in several competitions in the FIRST Tech Challenge.

**Mechatronics (MCT) is a multidisciplinary field of engineering that includes a combination of systems engineering, mechanical engineering, electrical engineering, telecommunications engineering, control engineering and computer engineering.
Science is a process for learning of the natural world. The process depends on making careful observations and on developing hypotheses for making sense of those observations. Changes in knowledge are inevitable as new observations challenge existing explanations. In science education, critical analysis leading to understanding of core concepts should be the focus. Mastery of vocabulary is a tool, not an end, needed to communicate understanding. The department endeavors to make science classrooms places where creativity and invention are recognized and encouraged. Students are given the opportunity to experience science as the process of extending understanding, rather than learning it as a collection of unalterable truths.

Three years of science in the Upper School is required, including Chemistry and Biology. All students enrolled in Advanced Placement courses will take the Advanced Placement examinations for those courses.

**CHEMISTRY**  
**Full Year – Six Periods per Week - One Credit**

Chemistry introduces the science of the composition, structure, properties, and reactions of matter, especially of atoms and molecules. Emphasis is placed on critical thinking skills. Students learn to analyze information and provide reasonable explanations for observed changes in matter and for the energy changes that accompany the changes in the structure of matter. There is one double period each week for laboratory experiences. Laboratory experiences supplement and reinforce skills learned in the classroom setting. Students are expected to master the skill of unit analysis, therefore basic algebra skills are necessary for successful completion of this course.

**CHEMISTRY HONORS**  
**Full Year – Six Periods per Week - One Credit**

Chemistry I Honors is an intensive study of the composition, structure, properties, and reactions of matter, especially of atoms and molecules. Excellent algebra skills and strong independent study habits are important to mastery of the course material. There is an emphasis on descriptive chemistry, particularly in the laboratory. There is one double period each week for laboratory experiences. Mastery of this course prepares students for the rigor of AP Chemistry.  
Prerequisite: Algebra II Honors (Co-Enrolled); Dean/Department Approval

**CHEMISTRY AP**  
**Full Year – Eight Periods per Week – One Credit**

Chemistry AP is the equivalent of an introductory college course. It is an extended study of the composition, structure, properties, and reactions of matter, especially of atomic and molecular systems. The focus is on thorough training in the fundamentals in order to develop each student’s ability to solve novel problems. Success in this course requires excellent algebra skills and student driven analysis. Students write the AP Examination in Chemistry.  
Prerequisite: Chemistry, Geometry; Dean/Department Approval
ORGANIC CHEMISTRY POST-AP
FULL YEAR – ONE CREDIT

Organic Chemistry focuses on understanding the structure and reactivity of organic molecules. Emphasis is on substitution and elimination reactions, chemistry of selected functional groups, and provides an introduction to the chemistry of aromatic compounds. In this course, students will explore the important reaction mechanisms in organic chemistry and develop a better understanding of structure/reactivity relationships found in organic molecules. Students will perform fundamental research techniques including crystallization, filtration, distillation, extraction, thin-layer and column chromatography. Students will also learn how to interpret spectroscopic data including: mass, IR, 1H NMR, and 13C NMR spectra in identification of unknowns.

Prerequisite: Chemistry AP; Dean/Department Approval

BIOLOGY
FULL YEAR – SIX PERIODS PER WEEK - ONE CREDIT

Biology is a laboratory course that provides students with a foundation in the six unifying principles of biology: evolution; cell structure and function; homeostasis; energy, matter, and organization; heredity; and interdependence (ecology). The course emphasizes active investigation of those principles. It seeks to engender critical thinking skills and problem solving experiences. Students learn by discovery with an emphasis on lab investigation and technology. Group work helps to teach respect for and understanding of the differences in students.

Prerequisite: Chemistry

BIOLOGY HONORS
FULL YEAR – SIX PERIODS PER WEEK - ONE CREDIT

Biology Honors is a comprehensive examination of the unifying principles of biology from a molecular perspective. Major themes include evolutionary theory, cellular organization and function, homeostasis, continuity, with a particular emphasis on molecular genetics and technology, and ecological interdependence. Laboratory work encourages a mastery of the process of scientific inquiry. Problem solving, requiring strong critical thinking skills, encourages students to apply biological knowledge to novel situations. Basic literacy in chemistry is fundamental to success in the course.

Prerequisite: Chemistry; Dean/Department approval

BIOLOGY AP
FULL YEAR – EIGHT PERIODS PER WEEK – ONE CREDIT

Biology AP provides a conceptual framework for understanding biological principles. It is a survey covering biological chemistry, cytology, cellular energy transformations, molecular genetics, heredity, evolution, taxonomy, systematics, population biology, and ecology. Laboratory work teaches the process of science and encourages independent and critical thinking. Students spend a minimum of sixty hours doing laboratory work. Some of the investigations are independent and long-term, including a six-week investigation of fruit fly genetics. Students write the AP Examination in Biology.

Prerequisite: Biology and/or Chemistry AP; Dean/Department Approval
Environmental Science AP

Full Year – One Credit

Environmental Science AP is the equivalent of a one-semester introductory college course in environmental science. The course introduces students to the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze natural and human-made environmental problems, and to examine alternative solutions to solving or preventing them. Topics include environmental ethics, biological communities and species interaction, ecosystem restoration and management, population dynamics, economics and the environment, toxicology, biodiversity, natural resources, pollution, resource management, and urbanization and sustainability. Students take the AP Examination in Environmental Science.

Prerequisite: Grade Ten Standing; Dean/Department Approval

Physics I AP

Full Year – Eight Periods per Week – One Credit

Physics I AP is the equivalent of one college semester of introductory, algebra-based college physics. Students explore principles of Newtonian mechanics; mechanical waves, sound and DC circuits. The course is based on six Big Ideas, which encompass core scientific principles, theories, and processes that cut across traditional boundaries and provide a broad way of thinking about the physical world. The course uses student-centered, inquiry-based instruction to foster deeper conceptual understanding and mastery of foundational physics principles while engaging in science practices.

Prerequisite: Pre-Calculus (Co-Enrolled) or Dean/Department Approval

Physics C: Electricity, Magnetism, and Mechanics AP

Full Year – Eight Periods per Week – One Credit

Physics C is a college level, calculus based study of introductory classical mechanics, electricity, and magnetism. It provides students with a clear understanding of the basic principles of the physical world and the application these principles to solve a wide variety of problems. It incorporates differential and integral calculus in the study of physical laws. Students take the AP examination in Physics C. This course is usually taken in the senior year.

Prerequisite: Chemistry, Biology, Calculus AB, and Dean/Department Approval
SCIENCE

ELECTIVES

ANATOMY AND PHYSIOLOGY I AND II HONORS
Semester One and Two – One Credit

Anatomy and Physiology I and II are focused studies of the major human organ systems at the honors level. Study will encompass the structure of specific cells, tissues, and organs, and their integrated function in maintaining homeostasis. Knowledge of biology and chemistry will be instrumental in exploring the processes of metabolism, fluid and electrolyte balance, and development in maintaining homeostasis. Anatomy and Physiology may also be taken for one-half credit in semester I.

Prerequisite: Biology (Co-Enrolled); Grade 10 Standing

MARINE SCIENCE I AND II HONORS
Semester One and Two – One Credit

Marine Science I and II is a comprehensive study of marine organisms and their environments at the honors level. In Marine Science I and II, the structure and function of oceans and their shorelines are explored as well as the human impact on these marine ecosystems. The study of these marine systems will also include oceanography, ocean geology, water chemistry, and marine ecology. Field trips and laboratory activities are an integral part of the course allowing students to engage in hands-on learning while investigating the living laboratory of the local coastal environment. Marine Science may also be taken for one-half credit in either semester 1 or 2.

Prerequisite: Grade Ten Standing

SCIENCE RESEARCH I (Year One of a Possible Three-Year Sequence)
Full Year – One Credit

Science Research I is open to rising sophomores, and these students may continue in the research program for an additional two years. This course provides opportunities for students to develop skills and interests in various scientific disciplines. In the first year, students develop a primary research problem in a scientific area and investigate it through a literature search and experimentation. Students read journal articles, design their experiments, write research papers, present findings in symposium style, and submit research papers to the Junior Science and Engineering Symposium, the Florida Junior Academy of Science, and other research review venues. This course is an honors level course.

Prerequisite: Grade Ten Standing, Application, Interview, and Committee Approval

SCIENCE RESEARCH II (Year Two of a Possible Three-Year Sequence)

SCIENCE RESEARCH III (Year Three of a Possible Three-Year Sequence)
Full Year – One Credit Each Year

The second and third years of the research program provide students with necessary support to refine a novel research question in a scientific area and investigate it through active experimentation. Students conduct research after school, on weekends and during the summer. Due to the independent nature of the student’s research and extensive time spent working on the project outside of class time, students in the junior and senior years of this program receive a multiplier equivalent of an AP course. Students read journal articles, design and conduct experiments, write research papers, present findings in symposium style, and submit research papers to the Junior Science and Engineering Symposium, the Florida Junior Academy of Science, and other research venues. Science Research II and III are considered AP level courses.

Prerequisite: Science Research I
SOCIAL SCIENCE/HUMANITIES

The Social Science and Humanities Department promotes an understanding of the rights and responsibilities of citizenship in a democratic society, and challenges students to understand economic, geographical, political and social themes of the world in which they will become leaders. Three and one-half Social Science/Humanities credits at the high school level are required for graduation: Great Decisions, Character, and Consequence (GDCC) is a one-half credit Humanities course that is required for all freshmen. A Global History, United States History, and one other Social Science elective make up the remaining three required credits. All students enrolled in Advanced Placement courses will take the Advanced Placement examinations for those courses.

GREAT DECISIONS, CHARACTER AND CONSEQUENCES – GDCC

Semester – One-Half Credit (Required Humanities Credit)

This course presents ethical dilemmas within a historical context. It examines justice, morality, obligation, character, equality, liberty, and human rights, introducing students to the philosophical and political writings of Aristotle, Hobbes, Locke, Rousseau, Kant, Bentham, Mill and Rawls. It extends these theories and philosophies to major historical events in US and world history. In this course, students will cultivate critical thinking skills, engage in civil discourse, and develop a framework for decision-making that will prepare them for leadership in school and in their communities.

Note: This class is a graduation requirement generally taken in grade 9. This course is also offered as part of Pine Crest Summer Programs to rising ninth grade students.

MODERN WORLD HONORS: 1750 TO THE PRESENT

Full Year – One Credit

This course has two main objectives. The first is to provide a comprehensive survey of the world civilizations that form our modern world. By the end of the course, students should be able to demonstrate a working knowledge of the major ideas, events, themes, and trends that have shaped modern world history. Since this course is also designed to expand the history skills of its students, it has as a second objective of improving the students’ writing techniques, primary and secondary source assessment, and constructing sophisticated argumentation. This course is only available to ninth grade students.

UNITED STATES HISTORY HONORS

Full Year – One Credit

The express purpose of this year-long course is designed to teach students to think critically about the issues that have confronted and influenced the United States through a process that integrates the examination of factual knowledge, the development and application of analytical skills, and the assessment of primary and secondary sources through the study of US History from North America’s Pre-Columbian beginnings to the present.

Prerequisite: Grade Ten Standing
SOCIAL SCIENCE/HUMANITIES

UNITED STATES HISTORY AP
FULL YEAR – ONE CREDIT

This course is designed to provide students with the analytical skills and factual knowledge necessary to deal critically with the problems and materials in United States History. The level of work within the class is comparable to a full-year introductory college course. Students will be expected to read the class text, as well as primary sources, and apply that knowledge to answering analytical essays, document essays, and multiple choice questions.
Prerequisite: Grade Ten Standing; Dean/Department Approval

ART HISTORY AP
FULL YEAR – ONE CREDIT

Art History AP follows a required course program from cave paintings to Post-modernism designed to support students’ in-depth learning, critical analysis, and understanding of connections among global artistic traditions. The course is designed to enable the student to develop their own voice through class discussion, written essays, timelines, art-making, art museum visits, and field trips.
Prerequisite: Grade Eleven Standing; Dean/Department Approval

HISTORY AND THEORY OF THE AVANT-GARDE IN ART POST-AP
FULL YEAR – ONE CREDIT

This course examines the emergence of the avant-garde in art starting from its inception in the mid-19th century through the present. We will explore the ways in which the avant-garde challenges the established political and artistic institutions, as well as the role of the avant-garde in raising awareness of social issues and its effect on mass culture and third-world cultures. Students will develop, write, and defend a research paper in consultation with the instructor, while also participating in group meetings, field trips, and discussions throughout the year.
Prerequisite: B+ or above in AP Art History; Dean/Department Approval

AP SEMINAR
FULL YEAR – ONE CREDIT

AP Seminar is an AP Capstone course focused on research, writing and critical analysis. It provides opportunities for students to make cross-curricular connections by exploring topics, questions and ideas from multiple perspectives. Students develop the key academic skills of collecting and analyzing research, and then crafting, communicating and defending evidence based arguments, both in writing and in presentations. Students write at least four evidence based essays each semester, and hone these skills both individually and through collaboration. We use the topic of “Media in America” as a vessel to learn these skills. We will delve into
current events, politics, bias in the media and social media. Students complete a team paper and presentation, an individual research based essay and presentation, as well as an end of course exam in order to earn their AP score at the end of the year.

Prerequisite: Grade Eleven Standing, United States History, and Dean/Department Approval

AP RESEARCH
FULL YEAR – ONE CREDIT

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 year-long research-based investigation to address a research question. In the AP Research course, students further their skills acquired in the AP Seminar course by understanding research methodology; employing ethical research practices; and accessing, analyzing, and synthesizing information as they address a research question. Students explore their skill development, document their processes, and curate the artifacts of the development of their scholarly work in a portfolio. The course culminates in an academic paper of approximately 4000–5000 words and a presentation with an oral defense. This information may be accompanied by a performance or exhibition of product where applicable. AP Research is not tied to a specific content area, rather it emphasizes and strives for competency in core academic skills.

Students who complete both of the AP Capstone courses (Seminar & Research) and earn a 3 or higher on both exams will receive an AP Seminar and Research Certificate signifying successful performance in those courses. Students who have earned at least a 3 on exams for four (4) additional AP Courses throughout high school, and successful complete the Capstone courses with exams scores of 3 or higher, will receive the AP Capstone Diploma from College Board. The AP Capstone Diploma signifies a student’s outstanding academic achievement and attainment of college-level academic and research skills.

Prerequisite: Grade Twelve Standing, AP Seminar, and Dean/Department Approval

EUROPEAN HISTORY AP
FULL YEAR – ONE CREDIT

The objective of the course is to increase students’ understanding and appreciation of European history while helping each student succeed on the AP European History exam. The course is divided into two semesters: (1) the Later Middle Ages through the French Revolution, and (2) the Industrial Revolution to the present. Areas of concentration include historical, political, and economic history coupled with an intense study of cultural, social, diplomatic, and intellectual institutions and their development. These areas are studied from a variety of perspectives with the hope of providing a balanced view of history. In addition to providing a basic exposure to the factual narrative, the goals of the course are to develop: (1) an understanding of the principal themes in modern European history (2) the ability to analyze historical evidence, and (3) the ability to express that understanding and analysis effectively in writing.

Prerequisite: Grade Ten Standing and Dean/Department Approval
GOVERNMENT AND POLITICS: UNITED STATES AP
FULL YEAR – ONE CREDIT

The express purpose of this year-long course is to prepare students to take the AP Exam for U.S Government and Politics. It requires a substantial amount of reading and preparation for every class, as it is taught as it would be in college. The objectives of this course go beyond a basic analysis of how our government “works.” Students of Government and Politics will do this by developing a critical understanding of the strengths and weaknesses of the American political system, as well as their rights and responsibilities as citizens. Students are responsible for keeping up with events in the news. Current events provide concrete connections for each lesson. To that end, throughout the year, the course text will be supplemented by relevant articles from sources such as The Washington Post, The New York Times, The Economist, Atlantic Monthly, NPR, and the Christian Science Monitor.

Prerequisite: Grade Ten Standing and Dean/Department Approval

GOVERNMENT AND POLITICS: UNITED STATES AP
SEMESTER ONE – ONE-HALF CREDIT

This is a one-semester iteration of the AP Government and Politics course.

Prerequisite: Grade Eleven Standing and Dean/Department Approval

GOVERNMENT AND POLITICS: COMPARATIVE AP
SEMESTER TWO – ONE-HALF CREDIT

Examining six key countries, students will delve deeply into the political, economic, and social functions of the international world. The countries we specifically study are the United Kingdom, Russia (formerly the Soviet Union), China, Iran, Nigeria, and Mexico. Since all six of these countries are frequently in the news, current events will be an important part of this course’s curriculum. Completion of this course will prepare the student for an understanding of concepts related to government as well as an appreciation for systems and societies outside the United States.

Prerequisite: Grade Eleven Standing and Dean/Department Approval
POLITICAL SCIENCE POST-AP
FULL YEAR – ONE CREDIT

This course will focus on evolving political issues and direct participation in civics, including but not limited to: designing and hosting civic events for the Pine Crest School community, volunteering at the polls on Election Day, and lobbying/proposing policy to the Florida state legislature. An interactive and competitive successor to the AP Government and Politics course, this course seeks to foster high levels of civic engagement and content knowledge. Additionally, students will participate in the “We The People: The Citizens and the Constitution” competitive program which may require travel to regional, state, and national competitions.
Prerequisite: Government and Politics: United States or Comparative AP, Application, and Dean/Department Approval

HUMAN GEOGRAPHY AP
FULL YEAR – ONE CREDIT

This course provides students with a learning experience equivalent to that obtained in most college introductory human geography courses. Students study the patterns and processes that have shaped human understanding, as well as the use and alteration of the Earth’s surface. They employ spatial concepts and landscape analysis to analyze human social organization and its environmental consequences.
Prerequisite: Dean/Department Approval

MACROECONOMICS AP
SEMESTER – ONE-HALF CREDIT

Macroeconomics is designed to give students a thorough understanding of the principles of economics that apply to an economic system as a whole. The course places particular emphasis on the study of national income and price determination, and also develops a familiarity with economic performance measures, economic growth, and international economics.
Prerequisite: Grade Eleven Standing and B+ in Pre-Calculus; Dean/Department Approval

MICROECONOMICS AP
SEMESTER – ONE-HALF CREDIT

Microeconomics provides a thorough understanding of the principles that apply to the functions of individual decision makers, both consumers and producers, within the larger economic system. It places primary emphasis on the nature and functions of product markets, and includes the study of factor markets and of the role of government in promoting efficiency and equity in the economy.
Prerequisite: Grade Eleven Standing and B+ in Pre-Calculus; Dean/Department Approval
SOCIAL SCIENCE/HUMANITIES

POLITICAL ECONOMY POST-AP
FULL YEAR – ONE CREDIT

This advanced course will involve extensive reading and critical analysis of books and articles covering most of the major areas of the subject. In addition to the required readings and regular discussion, students will design their own independent research projects, which will include persuasive essays, presentations, and substantial papers. Students will build on their knowledge base from their prior experience in AP Micro/Macro by studying the work of important economists, and topics will include policy debates in micro and macroeconomics, public choice, behavioral economics, and analysis of institutions. Students will hone their ability to apply economic reasoning to a wide variety of issues.
Prerequisites: B+ or above in Micro/Macroeconomics AP, Application, and Dean/Department Approval

PSYCHOLOGY AP
FULL YEAR – ONE CREDIT

The AP Psychology course is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major sub-fields within psychology. They also learn about the ethics and methods psychologists use in their science and practice.
Prerequisite: Grade Ten Standing and Dean/Department Approval

PSYCHOLOGY RESEARCH AND APPLICATIONS POST-AP
FULL YEAR – ONE CREDIT

This advanced course involves extensive critical analysis of current events, books, articles, and controversial research within psychology. Utilizing research methods, students will design and conduct independent research with human subjects, write consent forms, evaluate prior research, and collect data. Students will enhance their critical thinking skills by applying aspects of psychology to popular media and literature through writing assignments and presentations. In addition, students will have the opportunity to foster their communication skills by facilitating daily class discussions.
Prerequisites: B+ or above in Psychology AP, Application, Score of 4 or 5 on AP exam, and Dean/Department Approval
SOCIAL SCIENCE/HUMANITIES

WORLD HISTORY AP
FULL YEAR – ONE CREDIT

The skills developed in the AP World History course encourage student development of a greater understanding of the evolution of global processes and contacts including interactions over time. The course highlights the nature of changes in international frameworks and their causes and consequences, as well as comparisons among major societies. The global perspective necessary for material mastery can best be understood if we observe and analyze the patterns of continuity and change created by human interactions with other humans and with the environment of the planet. Thus, the course focuses on the crossings of boundaries and the linkages of systems in the human past. World history also involves thinking about patterns of change and continuity over time. Ultimately, the course advances the idea that historical inquiry should have the widest possible perspective and not be predetermined by fixed cultural or geographic categories.

Prerequisite: Dean/Department Approval

ELECTIVES

INTERNATIONAL RELATIONS HONORS
SEMESTER - ONE–HALF CREDIT

This one-semester course will provide an introduction to the subject of international relations, focusing on the large issues of war and peace. In the first part of the course, we will study war in a broad historical, political, social, and cultural context. We will examine the major events in the evolution of modern warfare, including World War II, the Vietnam War, the Arab-Israeli Wars, and the wars in Iraq and Afghanistan. In the second part of the course, we will study how the nations of the world have attempted to resolve international conflicts through diplomatic negotiations. In the final part of the course, we will study the changes that have taken place in international relations since the end of the Cold War, including both the greater interconnectedness of the world economy and the intensified ethnic strife that has occurred in places such as the former Yugoslavia and Ukraine. Course materials will include not only a variety of readings, but also excerpts from relevant movies, documentaries, and television news reports.

Prerequisite: Grade Ten Standing
LATIN AMERICAN HISTORY HONORS
Semester– One-Half Credit

This course is an introductory survey course on the history and politics of Latin America. Students will examine the historical and political-economic development of the region. The course will cover topics such as the Conservative Independence Movements and State-Formation; Liberal Oligarchic Rule and Top-Down Reforms, focusing on the cases of Colombia and Venezuela; the emergence of Import-Substitution Industrialization, Populism, and Corporatism through the experiences of Argentina and Brazil; the Washington Consensus and Bureaucratic Authoritarianism, looking at Chile as an example; and the Socialist Path in Central America and the Caribbean. Additionally, there will be focus on the democratization process and the quality of democracy as many countries in the region attempted to move towards consolidation. This course will provide students with an opportunity to understand the region in a way that will help them to better analyze current events in the region as well as U.S. policy towards the region.

Prerequisite: Grade Ten Standing

LAW IN AMERICAN SOCIETY HONORS
Semester– One-Half Credit

The purpose of this one-semester elective course will be to provide an introduction to the subject of Law in a broad historical, political, and social context. The course will cover six main areas of Law: (1) Criminal Law, (2) Civil Rights, (3) Civil Liberties, (4) Constitutional Law relating to separation of powers, (5) International Law, and (6) Military Justice. These subjects will be examined through the “case study” method, as each unit of the course will focus on major cases/trials related to the theme of the unit. Examples of cases/trials that will be considered include: the O.J. Simpson case; the Casey Anthony case; the Amanda Knox case; the assassination of President Kennedy; the “Mississippi Burning” case; the “Chicago Seven” trial; the Watergate scandal and its investigation; the impeachment of President Clinton; the Nuremberg War Crimes trial; the My Lai Massacre case; and the trial of Saddam Hussein. Course materials will include not only articles and selections from secondary books, government documents, and trial transcripts, but also excerpts from relevant movies and documentaries.

Prerequisite: Grade Ten Standing
In an age of global interdependence, the World Languages Department believes that proficiency in another language is the initial step in learning about other cultures and acquiring a broader worldview. In acquiring another language, students learn to be accurate, apply self-discipline, and use memory and reasoning, all of which will help them to think logically and analytically throughout their lives. All language courses offered by the Department embrace the learning of the four basic areas of language learning: Reading, Writing, Listening, and Speaking (RWLS). Pine Crest offers Chinese, French, Latin, and Spanish. Three world language credits in the same language in Upper School are required for graduation. New students are required to take a language placement test. Based upon this evaluation and teacher recommendations, the academic dean and members of the World Languages department will advise students on the appropriate course selection. All students enrolled in Advanced Placement courses will take the Advanced Placement examinations for those courses.

**CHINESE II**

**Full Year – One Credit**

Students continue to sharpen their skills in RWLS. Grammar and vocabulary are presented in greater detail. By the end of the year, students will be able to speak and respond to questions, as well as write and read material at a higher level.  
*Prerequisite: Chinese I*

**CHINESE II HONORS**

**Full Year – One Credit**

This course is for students who have excelled in Chinese I. Students develop communication in the language at an intermediate level. By the completion of the course, students will have mastered an additional 200 characters and 700 phrases and demonstrate proficiency in RWLS on an intermediate level.  
*Prerequisite: Dean/Department Approval*

**CHINESE III**

**Full Year – One Credit**

Chinese III is designed for intermediate students and refines their ability to communicate at a more advanced level through listening and speaking. At the end of the year, students will be able to communicate on a variety of common topics.  
*Prerequisite: Chinese II*

**CHINESE III HONORS**

**Full Year – One Credit**

This course is designed for the advanced intermediate students. Students will learn an additional 200 characters and approximately 800 phrases. Students discuss and write compositions at an advanced level on a variety of topics.  
*Prerequisite: Chinese II and Dean/Department Approval*
WORLD LANGUAGES

CHINESE IV
Full Year – One Credit

This course refines a student’s ability to communicate through listening and speaking at a more proficient level. Students continue to develop their proficiency in the language and gain confidence in their skills by reviewing vocabulary and structures.
Prerequisite: Chinese III

CHINESE IV HONORS
Full Year – One Credit

In this course students acquire 200 additional characters and approximately 1,000 phrases.
Prerequisite: Chinese III and Dean/Department Approval

CHINESE V HONORS
Full Year – One Credit

In this course, students continue to read and write, with special emphasis placed on the development of listening and speaking skills. At the conclusion of the course, students should be able to converse on a variety of topics at an intermediate to advanced level.
Prerequisite: Chinese IV

CHINESE LANGUAGE AND CULTURE AP
Full Year – One Credit

This college-level course is designed to deepen students’ immersion into the language and culture of the Chinese-speaking world, develop students’ awareness and appreciation of the elements of the culture, and engage students in an exploration of both contemporary and historical Chinese culture. Since the course interweaves language and culture learning, this exploration occurs in Chinese. Students are expected to achieve proficiencies throughout, and sometimes beyond, the intermediate range to advanced-level tasks. Students take the AP Chinese Language and Culture examination at the end of the course.
Prerequisite: Chinese IV Honors and Dean/Department Approval

FRENCH II
Full Year – One Credit

French II students have successfully completed either the French 7 and 8 or French I curricula. Students broaden their knowledge of verb tenses, grammatical structure, vocabulary, and culture through RWLS.
Prerequisite: French I
FRENCH II HONORS
FULL YEAR – ONE CREDIT

French II Honors students have successfully completed either the French 7 and 8 or French I curricula. Students continue their study of the basic areas of language learning. This course prepares students for the rigor of French III Honors.
Prerequisite: Dean/Department Approval

FRENCH III
FULL YEAR – ONE CREDIT

Students further their study of the indicative and subjunctive moods, practice complex grammatical structures, and expand their vocabulary. Classroom activities heighten an awareness of French culture.
Prerequisite: French II

FRENCH III HONORS
FULL YEAR – ONE CREDIT

This course continues to develop proficiencies in the basic grammatical structure of the language. Short stories, literary excerpts, French-speaking movies, and magazine/newspaper articles are an important part of the curriculum. The course emphasizes skills that are required for advancement to French IV Honors.
Prerequisite: French II and Dean/Department Approval

FRENCH IV
FULL YEAR – ONE CREDIT

Students review those skills acquired in previous courses. While students continue to read and write, a special emphasis is placed on the development of listening and speaking skills. At the conclusion of the course, students should be able to converse on a variety of topics at an intermediate level.
Prerequisite: French III

FRENCH IV HONORS
FULL YEAR – ONE CREDIT

This course develops proficiency in the basic structures of the language, especially in reading and writing. At its conclusion, students should be able to read and comprehend a variety of texts as well as express themselves well through oral and written communications. The course emphasizes skills that are required for the Advanced Placement French Language and Culture class.
Prerequisite: French III and Dean/Department Approval
FRENCH V HONORS
Full Year – One Credit

This course concentrates on the development of proficiency in the oral/aural skills of the language. Students review linguistic skills acquired in previous courses while concentrating on communication using speaking and writing activities on a variety of topics ranging from music and art to current affairs and literature.
Prerequisite: French IV

FRENCH LANGUAGE AND CULTURE AP
Full Year – One Credit

This college-level course refines listening, speaking, reading and writing skills. Students broaden their vocabulary by reading and discussing a variety of written texts. They express themselves in written and spoken French with reasonable fluency at the end of the course and take the French Language and Culture AP examination.
Prerequisite: French IV Honors and Dean/Department Approval

LATIN I HONORS
Full Year – One Credit

Through an intuitive and natural learning method, students will become familiar with the basic vocabulary, grammar, and syntax of the Latin language while also preparing them for reading and comprehension. Students will not only strengthen their understanding of the grammatical properties of the English language, but also of the other Romance languages while drawing upon the relationship between language and thought. Due to the interdisciplinary nature of the study of Latin, students will also learn about the culture, the history, and the legacy of ancient Rome.

LATIN II HONORS
Full Year – One Credit

Students will continue to develop their mastery of the Latin language, building an advanced understanding of its vocabulary, grammar, and syntax through an intuitive and natural learning method. Students will further strengthen their foundation for language acquisition of other languages while refining their abilities of expression of the English language. Due to the interdisciplinary nature of the study of Latin, students will also have opportunities to learn about the culture, history, and legacy of ancient Rome.
Prerequisite: Latin I Honors
LATIN III HONORS
FULL YEAR – ONE CREDIT
Students finalize their mastery of elementary Latin, enabling them to read and understand Latin without translation. Building on their advanced understanding of vocabulary, grammar, and syntax, students gain an intuitive understanding of Latin while also gaining the ability to “think” in the language. Students begin to read primary sources authored by major Roman writers and other intellectuals throughout history that communicated using Latin. Students will continue to develop their deep understanding of the culture, history, and legacy of ancient Rome.
Prerequisite: Latin II Honors

AP LATIN
FULL YEAR – ONE CREDIT
Students successfully completing the course will be able to read, understand, translate, and analyze both Latin poetry and prose by authentic authors. Students will demonstrate their understanding through literal translations, reading and comprehension of sight passages, and through the composition of written analyses, in both Latin and English, demonstrating a critical understanding of Latin literature. The aim of the course is to develop students’ abilities to translate and analyze specific readings from Caesar’s De Bello Gallico and Vergil’s Aeneid and to recognize the language choices of the authors. Students will also learn how Vergil used dactylic hexameter in the composition of his epic poem.”
Prerequisite: Latin III Honors

SPANISH I
FULL YEAR – ONE CREDIT
Students who have had no formal study of the language in Middle School are introduced to the four basic areas of language learning in Spanish I, RWLS. By the end of the year they are able to engage in simple conversations and read and write at a novice level. The customs and culture of Spanish speaking countries are presented through a variety of media.

SPANISH II
FULL YEAR – ONE CREDIT
Students in this course have successfully completed either the Middle School 7 and 8 or the Spanish I curricula. They continue to build upon basic grammatical structures and broaden their vocabulary. The course emphasizes the development of the four basic areas of language learning, RWLS. By the end of the year students will be able to accomplish a variety of intermediate functional skills that will enable communication of every day topics.
Prerequisite: Spanish I
SPANISH II HONORS
FULL YEAR – ONE CREDIT

This course is for students who have excelled in Spanish I. Students communicate at the intermediate level through RWLS. They master the indicative, subjunctive, and imperative moods in all tenses to speak and write about themselves and to acquire historical, geographical, and cultural information.
Prerequisite: Dean/Department Approval

SPANISH III
FULL YEAR – ONE CREDIT

Students develop the ability to communicate in the language on a high novice level through the four areas of language learning, RWLS. Students continue to study Spanish grammar and broaden their vocabulary. At the end of the year students will be able to accomplish a variety of intermediate functional skills which will enable communications of everyday topics.
Prerequisite: Spanish II

SPANISH III HONORS
FULL YEAR – ONE CREDIT

This course is designed for advanced intermediate students. It refines their ability to communicate in the language at a near native level through the four areas of language learning, RWLS. Upon completion of the course, students write compositions at an intermediate level on a variety of subjects, as well as read about, comprehend, and discuss different topics.
Prerequisite: Spanish II and Dean/Department Approval

SPANISH IV
FULL YEAR – ONE CREDIT

Students will have successfully completed either the Spanish III or Spanish III Honors course. They continue to develop their proficiency in the language and gain confidence in their skills by reviewing vocabulary and structures. Guest speakers and projects explore authentic Spanish culture.
Prerequisite: Spanish III
SPANISH IV LANGUAGE HONORS
Full Year – One Credit

This course develops proficiency in the four basic areas of language learning: reading, writing, listening, and speaking. At the conclusion of the course, students should be able to understand Spanish in a variety of contexts, read and comprehend a variety of texts, and express themselves in writing and speaking. The course prepares students for the SAT II with Listening and for continuation in Spanish AP Language and Culture the following year.
Prerequisite: Spanish III and Dean/Department Approval

SPANISH IV HONORS - HERITAGE SPEAKERS
Full Year – One Credit

This course is designed for students whose greatest exposure to Spanish has been in the home or community, rather than the classroom. The course is methodologically structured to refine productive and receptive skills in the language. The class emphasizes a balanced approach to language acquisition. Students read, write, listen, and discuss authentic material from a variety of sources. Upon completion, students will demonstrate the ability to communicate formally and informally with an extensive vocabulary and with few grammatical errors. This course is the required prerequisite to the SPANISH LANGUAGE AP (FOR HERITAGE SPEAKERS) AND CULTURE course in Grade Ten.
Prerequisite: Placement test and Dean/Department Approval

SPANISH IV LITERATURE HONORS
Full Year – One Credit

This course is designed to further develop proficiency in the structures and usages of the language with an emphasis on literature and literary analysis. It prepares students for the Advanced Placement Spanish Literature and Culture course. The class emphasizes a balanced approach to language acquisition, RWLS. Students are introduced to the traditional genres of Hispanic literature – prose, poetry, drama, and essay – through a variety of carefully selected texts. Upon completion of the course, students will demonstrate the ability to read texts of moderate difficulty, answer analytic questions that go beyond mere comprehension, and write organized compositions with few grammatical errors and specific vocabulary.
Prerequisite: Spanish III and Dean/Department Approval
SPANISH V HONORS
FULL YEAR – ONE CREDIT

A four-skill course with emphasis on speaking and listening, Spanish V offers students an opportunity to refine their production and understanding of the language and culture. Students are exposed to a variety of sources, including encyclopedias and multi-media materials. This course is intended for seniors who have a good foundation in grammar, and who are sufficiently competent with vocabulary to hold brief conversations. Upon completion, students will demonstrate the ability to respond appropriately to everyday situations, maintain conversations of high intermediate difficulty on a variety of topics, and describe specific elements of Hispanic tradition and culture.
Prerequisite: Spanish IV

SPANISH LANGUAGE AND CULTURE AP
FULL YEAR – ONE CREDIT

This college-level course develops proficiency in all areas of language learning, RWLS. Students use the language to discuss a in a variety of everyday situations. They read and discuss written texts in order to broaden vocabulary. Reasonable fluency in writing and speaking is a major course objective. Students take the Spanish Language and Culture AP examination at the end of the course.
Prerequisite: Dean/Department Approval

SPANISH LANGUAGE AND CULTURE AP (FOR HERITAGE SPEAKERS)
FULL YEAR – ONE CREDIT

This course is designed for students whose greatest exposure to Spanish has been in the home or community, rather than the classroom. The course is methodologically structured to refine productive and receptive skills in the language. The class emphasizes a balanced approach to language acquisition. Students read, write, listen, and discuss authentic material from a variety of sources. Upon completion, students will demonstrate the ability to communicate formally and informally with an extensive vocabulary and few grammatical errors. Students take the Spanish Language and Culture AP examination at the end of the course.
Prerequisite: Grade Ten Standing and Dean/Department Approval

SPANISH LITERATURE AND CULTURE AP
FULL YEAR – ONE CREDIT

Emphasizing literature and literary analysis, this course has been designed to refine Spanish reception and production. The course utilizes a balanced approach to language acquisition. Students read and write about selected texts at an advanced level that exemplify the traditional genres of Hispanic literature: prose, poetry, drama, and essays. Upon completion, students will demonstrate the ability to read texts of advanced difficulty, identify and explain symbolic and metaphoric structures, explain the relationship between form and content, and answer analytic questions. They will write organized essays utilizing extensive vocabulary and literary terms. Students take the Spanish Literature and Culture AP examination.
Prerequisite: Dean/Department Approval
The cornerstone of the Pine Crest academic experience is that within a challenging curriculum, an infusion of the Arts is inherent throughout. This difference makes a tremendous impact on the developmental growth of every child - placing a high value on learning through fun, imagination, and inspiration. Beyond aesthetic appreciation, the Arts teach students to be more tolerant and open, allow for creative self-expression, promote individuality, bolster self-confidence, and instill a drive for excellence — skills needed to succeed in the classroom and beyond. One credit of Arts coursework is required for graduation.

**DIGITAL MEDIA**

**FILM STUDIES: HISTORY, THEORY AND WRITING FOR THE SCREEN**

*Full Year – One Credit*

The goal of this course is to expose current Digital Media Production Students to the history of film beginning with its conception in the late 1800s. Students will explore how movies are made, the techniques used to tell visual stories, and how to critically analyze a film. Students will examine the development and evolution of the American studio system, the foreign film expansion, how films are used as propaganda and social commentary, and the great acting/directing/producing auteurs in movie history. Enrolled students will watch a variety of films (ranging from the first films created in the late 1800s/early 1900s to current day), write critical analysis of classic films, create their own short screenplays, and plan pre-production for their short. Students will leave the course with a short screenplay and the knowledge of film history that will help them develop and produce future films.

**TELEVISION BROADCASTING AND FILM PRODUCTION**

*Full Year – One Credit*

This course is designed as a flexible production course that allows students to explore three primary objectives: provide an immersive experience in producing live program productions, expose students to the basics of the screenwriting process and extensive training in cinematography and non-linear digital video editing and publishing with digital portfolios, resume, professional websites, content management systems, social media, basic operations in PhotoShop for photo editing, basics of HTML, embedded video, video compression and conversion with Adobe suite.

All work will be completed in a state-of-the-art, high-definition, digital broadcast studio and post-production facility. Instruction is differentiated to allow students the opportunity to explore areas of interest. Students may take this course for credit for more than one year. Every year, all students will be invited to participate in the annual Student Television Network (STN) convention and national competitions. This is an exciting off-campus event that is held in various cities across the U.S. annually that provides students an opportunity to showcase their talents and hone their skills.
DIGITAL MEDIA AND FINE ARTS

ADVANCED TELEVISION PRODUCTION
FULL YEAR – ONE CREDIT

This course is designed for current Digital Media Production Students to delve deeper into the broadcast genre of production of their choice. Students will focus on building specific branded program types as they expand their skills and push their content creation ability even closer to that of professional media. They will also hold leadership roles in the production of PCTV weekly, PCTV quarterly, and PCTV Sports. Students will gain practical knowledge in the positions of Producer, Anchor, Niche Program Director, Chief Editor, and Correspondent / Beat Reporter. Areas of instruction will center on Broadcast Journalism, on-air talent and program delivery, advanced post production and web publishing.

Prerequisite: One Year of Television Broadcasting and Film Production

FILM PRODUCTION
SEQUENTIAL SEMESTER COURSEWORK – ONE-HALF CREDIT EACH SEMESTER

Film Production I: Students will plan, write, direct, shoot, and edit video using digital video cameras and professional computer editors, audio, and lighting equipment. Students will work in a modern video and film pre-production and physical production facility with industry standard, state-of-the-art equipment. Student projects may be entered in local and national film festivals.

*Film Production II: Students will work with the Adobe Suite of editing tools to manipulate footage shot in Film Production I, focusing on color, sound, and special effects.

Prerequisite: One Year of Television Broadcasting and Film Production

FINE ARTS: DANCE

ADVANCED BALLET
FULL YEAR – DOUBLE PERIOD EVERY OTHER DAY - ONE CREDIT

Selected by audition, students continue with traditional ballet technique, dance theory, kinesiology and ballet history. Higher level barre work addresses quick changes of weight and rhythm, and artistry. Topics include principles of composition, dance as communication, applying and demonstrating critical thinking skills, dance and healthy living, dance in world culture. This course is offered with a Health component that meets once per week for the entire year which fulfills the Health/PE required for graduation.

Prerequisite: Audition and Department Approval
BEGINNERS/INTERMEDIATE BALLET

Full Year – One Credit

This level of ballet is taught through barre work, stretching, and core focus. Proper placement and posture are stressed, with special attention to rotation, extension, and lengthening and muscle development. This course is offered with a Health component that meets once per week for the entire year which fulfills the Health/PE required for graduation.

CONTEMPORARY WORLD DANCE SURVEY

Full Year – One Credit

Designed for the intermediate to advanced dancer, topics explored include contemporary, modern, lyrical, and jazz styles of dance. Students will be graded based on the understanding of the technique and history of each dance style. Students will study and delve into the dance techniques of world renowned teachers and choreographers such as Martha Graham, Twyla Tharp, and Bob Fosse. This course is offered with a Health component that meets once per week for the entire year which fulfills the Health/PE required for graduation.

Prerequisite: Successful Completion of Beginners/Intermediate Ballet, and/or Permission of the Instructor

INTRODUCTION TO DANCE I

Full Year – One Credit

This entry level course is aimed at the non-traditional dancer. In the course of the semester, students will be introduced to various styles and topics of Dance, including: ballet, hip-hop, jazz, modern, tap and world dance. Strength conditioning, gross motor skills, and physical coordination will all be addressed through movement. This course is offered with a Health component that meets once per week for the entire year which fulfills the Health/PE required for graduation.

FINE ARTS: MUSIC

BAND

Full Year – One Credit

Experienced student musicians perform music from the classic and contemporary wind ensemble repertoire in concerts and competitions throughout the year. As with all school ensembles, this course offers a well-rounded, disciplined, and professional approach to playing, interpreting, and listening to music of the highest quality. Students will demonstrate improvement in sight reading, analysis, and execution of music fundamentals.

Prerequisite: Experienced Musicians; New Students – Audition Required
HONORS JAZZ ENSEMBLE  
**Full Year – Three Periods per Week – One-Half Credit**

Selected by audition, this course offers a challenging and professional approach to performing, interpreting, and listening to music of the highest quality. In addition to their work in the large ensemble, experienced student musicians perform music from the classic and contemporary repertoire in concerts and competitions throughout the year. Students will demonstrate improvement in sight reading, analysis, and execution of music fundamentals. Additional participation in district/state music events and festivals required.

*Prerequisite: Experienced Musicians; New Students – Audition Required  
Co-Requisite: Enrollment and Participation in Large Ensemble – Five Days/Week - BAND*

CHORUS  
**Full Year – One Credit**

Experienced student musicians perform music from the classic and contemporary choral repertoire in concerts and competitions throughout the year. As with all school ensembles, this course offers a well-rounded, disciplined, and professional approach to singing, interpreting, and listening to music of the highest quality. Students will demonstrate improvement in sight reading, analysis, and execution of music fundamentals.

HONORS VOCAL ENSEMBLE  
**Full Year – Three Periods per Week – One-Half Credit**

Selected by audition, this course offers a challenging and professional approach to performing, interpreting, and listening to music of the highest quality. In addition to their work in the large ensemble, experienced student musicians perform music from the classic and contemporary repertoire in concerts and competitions throughout the year. Students will demonstrate improvement in sight reading, analysis, and execution of music fundamentals. Additional participation in district/state music events and festivals required.

*Prerequisite: Experienced Musicians; New Students – Audition Required  
Co-Requisite: Enrollment and Participation in Large Ensemble Five Days/Week - CHORUS*

ORCHESTRA  
**Full Year – One Credit**

Experienced student musicians perform music from the classic and contemporary string ensemble and orchestral repertoire in concerts and competitions throughout the year. As with all school ensembles, this course offers a well-rounded, disciplined, and professional approach to playing, interpreting, and listening to music of the highest quality. Students will demonstrate improvement in sight reading, analysis, and execution of music fundamentals.

*Prerequisite: Experienced Musicians; New Students – Audition Required*
HONORS STRINGS ENSEMBLE
FULL YEAR – THREE PERIODS PER WEEK – ONE-HALF CREDIT

Selected by audition, this course offers a challenging and professional approach to performing, interpreting, and listening to music of the highest quality. In addition to their work in the large ensemble, experienced student musicians perform music from the classic and contemporary repertoire in concerts and competitions throughout the year. Students will demonstrate improvement in sight reading, analysis, and execution of music fundamentals. Additional participation in district/state music events and festivals required.  
Prerequisite: Experienced Musicians; New Students – Audition Required  
Co-Requisite: Enrollment and Participation in Large Ensemble Five Days/Week - ORCHESTRA

FUNDAMENTALS OF MUSIC THEORY
FULL YEAR – ONE CREDIT

The content of this course will provide student musicians with a better conceptual understanding of the elements and principles of musical organization. This course prepares the basic foundation for success in Music Theory AP.

MUSIC THEORY AP
FULL YEAR – ONE CREDIT

The ultimate goal of a Music Theory AP course is to develop a student’s ability to recognize, understand, and describe the basic materials and processes of music that are heard or presented in a score. Students will further develop fundamental aural, analytical, and compositional skills through both listening and written exercises. Building on this foundation, the course progresses to include more creative tasks, such as the harmonization of a melody by selecting appropriate chords, composing a musical bass line to provide two-voice counterpoint, or the realization of figured-bass notation.  
Prerequisite: Grade Ten Standing, Fundamentals of Music Theory, and Department Approval
FINE ARTS: DRAMA AND DEBATE

ACTING AND THE THEATER
FULL YEAR – ONE CREDIT

Through text analysis and character development with a focus on the actor’s instrument, students will master the fundamentals of performance. Students are up on their feet from day one, creating, moving, Acting! Drawing from contemporary and classical texts, students will explore the process of Stanislavskian acting technique and develop listening and reacting skills. In addition, we will investigate the craft of the playwright, director, actor, designer and producer. Students will gain an appreciation of these disciplines, enhance their knowledge of the process and recognize the contributions of various theatre artists from classical and modern works. A special emphasis is placed on preparing scene work and monologues for District and State Thespian competitions, where student’s work is rated and critiqued by industry professionals.

FORENSICS

FORENSICS I
SEQUENTIAL SEMESTER COURSEWORK – ONE-HALF CREDIT EACH SEMESTER

Forensics I is a one semester in depth study of policy debate, argumentation, current events, and logic. Argumentation, much like chess, involves thinking ahead, developing strategy, and planning for contingencies. Two of the primary goals are to understand what must be done to win a debate and to utilize a variety of techniques to aid in obtaining those wins. To meet these goals, we will have numerous in class debate simulations, case studies, and lessons on argumentation. Each student in Forensics I will, at least temporarily, become a member of the Pine Crest Debate Team and will be required to earn 20 National Speech and Debate Association points.

FORENSICS II
SEQUENTIAL SEMESTER COURSEWORK – ONE-HALF CREDIT EACH SEMESTER

Forensics II is a continuation of Forensics I. During this one semester courses, students will continue to hone their policy debate, argumentation, and logical thinking skills in an attempt to become better advocates. In addition to policy debate, students will also be introduced to alternative forms of debate. Forensics II will focus more on execution during debates as students will already know the idea of what they are supposed to do. Each student in Forensics II will, at least temporarily, become a member of the Pine Crest Debate Team and will be required to earn 20 National Speech and Debate Association points.
DIGITAL MEDIA AND FINE ARTS

FINE ARTS: VISUAL ARTS

DIGITAL ARTS I
FULL YEAR – ONE CREDIT

This course will provide students with foundational skills in elements and principals of design through the use of Adobe Photoshop, Adobe Illustrator, Tinkercad and various other digital photography and video techniques. Through a series of complex assignments, students will create logos, art posters, portraits, digital paintings and collage, animation, videos and 3-D prints. The ability of students to grasp concepts and demonstrate improvements in design are course objectives. The second semester of the course expands upon the student’s grasp of design skills to successfully execute complex projects using Adobe Creative Suite, Tinkercad and the Innovation Lab through a variety of assignments that mirror real world design such as video art sculpture, animation and video shorts, and wearable art technology. The study of famous graphic designers, animators and videographers, the development of a personal portfolio, and a theme-driven project prepare students for university level studies.

ADVANCED DIGITAL ART and DESIGN
FULL YEAR – ONE CREDIT

Students will prepare for Studio Art – 2D Design AP and learn more advanced techniques in Photoshop and Illustrator, a more complete instruction into digital photography and graphic design. They will learn to combine digital techniques with traditional techniques, using sculpture, light and sound to make an art piece. They will also learn to paint in Photoshop as if it were a traditional canvas, creating their own fabric/pattern design for printing. Additionally students will establish a more professional social media presence to use for their portfolio. Prerequisite: Digital Arts I

DRAWING AND PAINTING I
FULL YEAR – ONE CREDIT

Students study basic design, drawing, and painting in this two-semester sequential studio art program. Directive/objective and expressive methods of producing artwork are explored, requiring students to make decisions, solve problems, and issue statements. Students explore the methods and potentials of different media, including pencil, charcoal, pastels, watercolors, and acrylic paint. The use of digital imagery and research using traditional and online research is required. Works skillfully completed may be included towards the preparation for the student’s portfolio in AP Studio Art.

DRAWING AND PAINTING II
FULL YEAR – ONE CREDIT

Students continue to develop their drawing and painting skills, either as preparation for AP Studio Art in a successive course or to satisfy their interests. Students use a variety of media and are expected to demonstrate an increased sophistication of skill, insight, and interest beyond that shown in the beginning course. Evaluations are more demanding and assignments are generally more conceptual in nature. No text is required, but students make frequent use of in-class periodicals, reference books, and online research. Prerequisite: Drawing and Painting I
STUDIO ART DRAWING AP
Full Year – One Credit

In the Drawing Portfolio, your mastery of drawing can be demonstrated through a wide range of approaches and media. Light and shade, line quality, rendering of form, composition, surface manipulation, and the illusion of depth are drawing issues that can be addressed through a variety of means, which could include painting, printmaking, mixed media, etc. Abstract, observational, and inventive works may be submitted. The range of marks used to make drawings, the arrangement of the marks, and the materials used to make the marks are endless. Any work submitted in the Drawing Portfolio that incorporates digital or photographic processes must address drawing issues such as those listed above, as well as mark-making. Using computer programs merely to manipulate photographs through filters, adjustments, or special effects is not appropriate for the Drawing Portfolio.

Prerequisite: Drawing and Painting II and Dean/Department Approval

STUDIO ART 2-D DESIGN AP
Full Year – One Credit

Design involves purposeful decision-making about using the elements and principles of art in an integrative way. In the 2-D Design Portfolio, students should demonstrate their understanding of design principles as applied to a two-dimensional surface. The principles of design (unity/variety, balance, emphasis, contrast, rhythm, repetition, proportion/scale, and figure/ground relationship) can be articulated through the visual elements (line, shape, color, value, texture, space). Any 2-D process or medium may be submitted, including, but not limited to, graphic design, digital imaging, photography, collage, fabric design, weaving, illustration, painting, printmaking, etc. Videotapes, three-dimensional works, and photocopies of your work in other media may not be submitted.

Prerequisite: Digital Arts and Drawing and Painting I and/or II

SCULPTURE AND CERAMICS I
Full Year – One Credit

Students work with clay (ceramics), plaster, cardboard, paper, and found objects to create sculptures that are both thematic and personally expressive in this two semester sequential studio art program. All projects challenge students to arrange and rearrange materials, to effectively solve a problem, and/or make an aesthetic art piece. Students use periodicals, resource books, and on-line resources for reference.

SCULPTURE AND CERAMICS II
Full Year – One Credit

Students continue to develop skills beyond those acquired in Sculpture-Ceramics I. The course may be taken as a pre-preparation for Studio Art 3-D Design AP or to satisfy specific interests. Students will be expected to demonstrate competencies and insights beyond those learned in the beginning course. No text is required, but frequent referral to in-class periodicals and computer research is expected.

Prerequisite: Sculpture and Ceramics I
STUDIO ART 3-D DESIGN AP  
FULL YEAR – ONE CREDIT

Students are required to complete 20 sculptures by the end of the year. Design involves purposeful decision-making about using the elements and principles of art in an integrative way. In the 3-D Design portfolio, you should demonstrate your understanding of design principles as they relate to depth and space. The principles of design (unity/variety, balance, emphasis, contrast, rhythm, repetition, proportion/scales, and figure/ground relationship) can be articulated through the visual elements (mass, volume, color/light, form, plane, line, texture). These issues can be explored through additive, subtractive, and/or fabrication processes. Examples of approaches include figurative or nonfigurative sculpture, architectural models, metal work, ceramics, and three-dimensional fiber arts, among others.  
Prerequisite: Sculpture and Ceramics II

ADVANCED EXPLORATIONS IN THE VISUAL ARTS POST-AP  
FULL YEAR – ONE CREDIT

Design insight, individual expression, and artistic maturity are required in this advanced art course. Students will participate in a wheel rotation of specific engaging units such as printmaking, ceramics, fabric arts, and applied digital arts. This will enable a more engaging, in-depth study, acquisition and application of artistic skills in a variety of art mediums. The course will culminate in a spring Senior Art Show.  
Prerequisite: One or More Studio Art AP Courses

VISUAL ARTS AND DIGITAL MEDIA DESIGN  
FULL YEAR – ONE CREDIT

Students will gain skills in advanced publishing techniques, copywriting, editing, photography and digital page design, while producing a creative and innovative edition of The Crestian. This book chronicles school events and serves as a historical record of the community (students, faculty, and staff) for a particular school year. This course has an emphasis on journalism skills, therefore students will be given challenging real world projects and assignments typical of the graphic design and publishing industries. Participants apply to positions within the editorial team, the production team or the business team. In their roles, students will gain useful skills in time management, teamwork, problem solving, design principles, and marketing.
The Physical Education Department provides opportunities for instruction and participation in physical activity and opportunities to integrate related knowledge impacting health and human performance. The goal is for students to practice healthy and active lifestyles, becoming the well-rounded student who personifies “a healthy mind in a healthy body.”

Two semesters of Physical Education are required. A semester credit may be earned by taking a class on campus or by participating in a sport on or off campus. All freshman students are expected to report to physical education if it appears on their schedule. If they will be involved in a sport on or off campus, they are to attend Physical Education class until the proper paperwork has been submitted by the student or coach and approved by the Upper School office. Off-campus sports will NOT fulfill the PE requirement if the sport is offered at Pine Crest. Requirements may be satisfied over a two-year period. Students may opt for Physical Education classes beyond the graduation requirements; however, no credit will be awarded and the course will not appear on the report card or on the transcript.

The Health component is required in the freshman year. Students may fulfill this requirement in the summer prior to the ninth grade as part of the Pine Crest Summer Programs, or in semester one or semester two of the ninth grade year.

HEALTH
Semester – One-Half Credit

This Health course will address major health concerns facing high school students. Instruction in CPR and the use of the AED (automated external defibrillator) will be included. Course work will include written assessments and presentations. Health is a graded course and included in students’ overall GPA.

PHYSICAL EDUCATION AND HEALTH FOR DANCE STUDENTS
Full Year – One Credit

This following courses when combined with the health component satisfy the physical education and health requirements: Advanced Ballet, Ballet Beginner/Intermediate, Contemporary World Dance Survey, Introduction to Dance I.

PHYSICAL EDUCATION – PERFORMANCE TRAINING
Semester One – One-Half Credit or Semester Two – One-Half Credit

Performance Training is designed to provide the student an opportunity to engage in a variety of programs that will improve their athletic performance. Programs are developed using best practices from fields such as kinesiology, biomechanics, functional movement and other areas of the sport sciences. Topics, which may be explored, include strength training, plyometric training, speed and agility training, psychology of sports, sports nutrition, and flexibility. Tests using the latest technology will be used to determine measurements of power, speed, flexibility, strength, and conditioning in order to track and evaluate student progress.