Northside College Preparatory High School

Program of Studies
2020-2021
**denotes courses requiring approval. Please view the Northside College Prep Approval Guide for more information
The Mission of Northside College Preparatory High School is:

To create a responsive environment that challenges all to embrace the joy of discovery, nurtures learners as they strive to fulfill their individual and collective potential, and empowers students to pursue their roles in the local and global communities.

We value ENGAGEMENT and believe...

- learners thrive most when they value and relish the learning of the moment, in and for itself, not simply as a means to a later goal.
- every person is a learner and a teacher who constructs meaning and understanding.
- reflection on both failure and success is necessary for growth.

We value ETHICS and believe...

- ethical behavior underlies each individual’s endeavors, and self-respect is built upon achievement and integrity.
- individuals enrich the democratic values and practices of the society in which they live.
- all must accept the challenge to share their gifts with others for the betterment of the world in which they live.

We value CURIOSITY and believe...

- creative exploration and expression foster curiosity and deeper understanding.
- student inquiry and interests influence educational experiences in and out of the classroom.
- it is important to recognize experiences beyond the school walls and celebrate them as powerful drivers of learning.

We value COLLABORATION and believe...

- people grow and learn through challenging themselves and collaborating with others.
- people share credit and take responsibility for their work.
- students, parents, teachers, administrators, and community leaders create and sustain a nurturing learning environment.

We value EMPATHY and believe...

- a meaningful education balances academic, social, and emotional needs and experiences.
- we all must recognize, understand, and acknowledge different perspectives and experiences and value how they enrich our community.
- in speech and action we look beyond ourselves and consider our impact on others.
Northside College Preparatory High School seeks to offer its students challenging and innovative courses in all subject areas. A fundamental belief of NCP is that all students deserve an excellent program of instruction that challenges each student at the high level required for productive citizenship and employment.

The following statements of educational philosophy shape the program of study at Northside College Preparatory High School:

**Content of Courses**

- Learning is enhanced when content is placed in meaningful context and is connected to other subject areas and when students are given multiple opportunities to apply what they are studying in meaningful ways.
- A complete and coherent curriculum must focus on the development of concepts, skills, and processes that enable all students to formulate, analyze, and solve problems proficiently.
- The entire curriculum must focus on the development of communication skills.
- The widespread impact of technology on nearly every aspect of our lives requires changes in the content and nature of educational programs.

**Teaching and Learning**

- Subjects must be taught by teachers who not only have a sound knowledge of their content area but who also possess a strong understanding of how students learn.
- Learning is maximized when teachers focus on thinking and reasoning.
- Teachers guide the learning process in their classrooms and manage the classroom environment through a variety of instructional approaches directly tied to the content and to the students’ needs.
- Learning is enriched through collaborative effort.
- Instructional approaches should be based on research about how students learn best. Students use diverse strategies and different approaches to construct meaning; teachers recognize and take advantage of these alternative approaches to help students develop better understanding.
- The assessment of understanding in a subject area must be aligned with the content taught and must incorporate multiple forms of assessment, including standardized tests, quizzes, research, performance tasks, investigations, and projects.
General Academic Information

1. All courses offered at Northside College Preparatory High School are college preparatory courses. The graduation requirements are the following:

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<tr>
<th>High School Graduation Requirements</th>
<th>Recommended College Prep Program</th>
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<td>4 English</td>
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<td>3 Mathematics</td>
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<tr>
<td>3 Science</td>
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<td>3 Social Science</td>
<td>3 Social Sciences</td>
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<td>2 World Language</td>
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<td>2 Fine Arts</td>
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<td>4 Physical Education</td>
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<td>3 Electives</td>
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<tr>
<td>1 Computer Science</td>
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<tr>
<td>Student Advisory</td>
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<td>25 Credits</td>
<td>28 Credits</td>
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2. A program of courses is developed at a conference with the student and his advisor. Final course selection will need the approval of department chairs and the parents.

3. All core courses are offered at the honors or advanced placement level.

4. Each student must pass an examination on the Declaration of Independence, the flag of the United States, the Constitution of the United States and the Constitution of the State of Illinois.

5. Each student must complete a six week unit in Consumer Education.

6. For a more detailed description of CPS Requirements, visit the [CPS Getting to the Next Grade site](#).

*The Design for High Schools allows that advanced academics may be substituted for College Career Pathways to meet the career education requirements, e.g. additional language, science, mathematics, English, or Fine Arts courses.*
**Course Descriptions**

**Core Courses**

**Honors English I: Survey of Literature**  
(1.0 Credit)

Honors English I: Survey of Literature contains several identifiable content strands: genres within literature, writing, language, research, and oral communication. This course utilizes American, British, and world literature to introduce students to various genres and literary terms; emphasizes writing in a variety of forms and for a variety of purposes; stresses both mastery of the fundamentals of grammar, usage, and the study of vocabulary and spelling within the context of the student's own reading and writing; introduces research techniques and citation methods; and explores several modes of oral communication.
Humanities  
*(1.0 Credit)*

Humanities involves expanding one’s capacity for thought, sensitivity, and creativity through the study of culture, literature and the arts. This course also emphasizes writing in a variety of forms and for a variety of purposes; stresses both mastery of the fundamentals of grammar, usage, and the study of vocabulary and spelling within the context of the student’s own reading and writing; introduces research techniques and citation methods; and explores several modes of oral communication. In preparation, all incoming students will read selected works of literature over the summer and a test on the content of these works will be part of the first quarter grade. For incoming freshmen with English I credit from a CPS Academic Center only.

**Honors English II: American Literature**  
*(1.0 Credit; Prerequisite: Honors English I)*

Honors English II: American Literature focuses on the philosophical movements, major writers, and themes of American literature while developing the processes of effective reading. This course continues to emphasize writing in a variety of forms and for a variety of purposes; stresses both mastery of the fundamentals of grammar, usage, and the study of vocabulary and spelling within the context of the student’s own reading and writing; introduces research techniques and citation methods; and explores several modes of oral communication.

**Honors English III: British Literature**  
*(1.0 Credit; Prerequisite: Honors English II or AP English Language and Composition)*

Honors English III: British Literature is a survey course in literature exploring the development of modern English from its origins in the Anglo-Saxon and Renaissance periods to the modern British novel. The readings are taken from a broad spectrum of British history, as well as various genres and forms of the British canon. The process of effective reading continues and is heightened through analytical, expository, and creative writing. Students will also engage in research and application of literary criticism, building toward a final thesis defense project examining critical trends and themes of the British canon.

**Honors English IV: World Literature**  
*(1.0 Credit; Prerequisite: Honors English III, or AP English Language and Composition, or AP English Literature and Composition)*

Honors English IV: World Literature is a balanced survey of literary genres in a global context. Focusing upon philosophical movements, major writers, and themes of world literature, students will perform the processes of effective reading, writing, research, and oral communication skills are polished through a variety of critical and creative experiences in preparation for the expectations of college. The course will begin with a discussion of memoir and narrative to better prepare students for the college application process.

**Elective Courses: Advanced Placement**

**AP English Language & Composition**  
*(1.0 Credit; Prerequisite: sophomore/junior/senior standing and an application process)*

*AP English Language and Composition* examines primarily non-fiction works (e.g., biographies and autobiographies, essays, journalism, social and political writing, science and nature writing) across a wide range of periods and rhetorical contexts. Students read closely in order to better understand why authors, when communicating with particular audiences, make the choices they do. Students become skilled at writing for a variety of purposes, audiences, and occasions. This course prepares the student for college level reading, writing, and thinking, in addition to the Advanced Placement test in English Language and Composition.

**AP English Literature & Composition**  
*(1.0 Credit; Prerequisite: AP English Language & Composition and an application process)*

AP English Literature and Composition is a rigorous college level course that asks students to expand, challenge, and reexamine their understanding of imaginative literature. Through reading critically, closely, and carefully, students deepen their awareness of a work’s structure, style, and themes, as well as the use of figurative language, imagery, symbolism, and tone. Writing assignments concentrate on the critical analysis of literature and include expository, analytical and argumentative essays. Writing instruction focuses on developing clear, cohesive, and persuasive written work. Finally, the class will place students in a broad cultural conversation with the world. This is a senior level course. The course prepares students for college level reading, writing, and thinking, as well as the AP examination in May.
**Elective Courses: Literature Emphasis**

**Honors Film Studies: The Rhetoric of Cinema**
(1.0 Credit)

Honors Film Studies is a course that engages students in becoming skilled readers of films as texts. Readings and coursework will enable students to analyze the rhetoric of cinema and look critically at the various ways films construct meaning creating both major and minor ideological positions. Building upon skills from other English classes, this rigorous class will teach students to critically discuss and write about films from various genres and time periods. They will complete several presentations and write film analysis and research papers.

**Honors Introduction to Philosophy in Literature**
(1.0 Credit)

Honors Introduction to Philosophy in Literature students will prepare students for complex readings in nonfiction, emphasizing skills in analysis, argument, and application of philosophical arguments through speaking and listening activities as well as different kinds of writing tasks. Readings range from ancient Greek to contemporary philosophers, as well as contemporary fictional and cinematic works to discuss questions of ethics, metaphysics, epistemology. The class will culminate in a genius hour research task, whereby the student will choose a specific philosophical topic to present on by finding a relevant paper and argument.

**Honors Topics in Literature: Experimental Literature ("X-Lit")**
(1.0 Credit)

This course will examine a wide variety of new and evolving literary forms, genres, and sub-genres to expose students to the most current developments in literature and composition. While students already encounter a broad survey of genre in Survey Literature, American Literature and Advanced Placement offerings, we will examine emerging and nonstandard literary forms. Ultimately, students will have the opportunity to truly stretch their literary legs, so to speak, in exploration and analysis of cutting-edge literature and criticism.

**Elective Courses: Writing Emphasis**

**Honors Creative Writing I**
(1.0 Credit)

In this course, students will explore writing as an art form. Students will closely study the art of writing and trace the evolution of the writer through the study of literature. As students read ground-breaking texts, they will attempt to find their own voices by writing poetry, fiction, non-fiction and drama.

**Elective Courses: Performance Emphasis**

**Honors Drama Literature & Performance**
(1.0 Credit)

In this introductory course, students develop skills pertaining to several different aspects of theatre: analyzing text as a play script, oral interpretation, acting, and directing, as well as set and costume design. Students will also explore the history of theatre and dramatic literature. The course is designed to foster growth in students of all ability levels--from novices to experienced performers. Students will also have the opportunity to view and critique live performances.

**Elective Courses: Journalism Program**

**Honors Journalism I - III**
(1.0 Credit)

*Journalism I* produces the school’s weekly, web-based newspaper *The HoofBeat*. Students will study the history of journalism and learn how to write news, features, arts reviews, sports coverage, and editorial articles. Students will pitch story ideas, as well as accept writing assignments from student editors. In the second semester, students showing exceptional talent, demonstrated skills, and strong work ethic may begin working as section editors. In addition, students will keep weekly news journals based on their analysis of professional news sites, take bi-weekly news quizzes, and learn basic photographic skills.

*Journalism II* creates editors for the newspaper, as well as mentors to the students in *Journalism I*. *Journalism II* students build upon the technical skills acquired the previous year, and continue to write as well as edit for their designated sections. They will become better familiar with investigative journalism and long-form journalism and may create assignments in these genres. Lead
editors are responsible for the creation and submission of the weekly edition of *The HoofBeat*. Routine assignments such as weekly news journals and news quizzes are continued. Students may enter competitions in journalism and attend seminars related journalism.

*Journalism III* provides additional editors for *The HoofBeat*, as well as mentors to the students in *Journalism I and II*. *Journalism III* students also further build upon the technical skills acquired the previous year. Routine assignments from *Journalism I* and *Journalism II* are continued throughout *Journalism III*. 
Course Descriptions

Core Courses

Honors World Studies
(1.0 credit)
This course helps students know the world and understand how it arrived at its present condition. Students learn to view the world in various disciplines—such as geographers, historians, political scientists, economists, anthropologists, and sociologists. The course analyzes four regions of the world—Africa, Asia, Europe, and Latin America—and assesses their development from 1500 CE. As an introductory freshman course, students gain basic skills in analytical thinking, writing, public speaking, group and individual work, research, and problem solving.

The United States History requirement can be met with either the Honors or AP level course.

Honors United States History
(1.0 credit; Prerequisite: Honors World Studies)
This is a survey course that provides students with an investigation of important political, economic, and social developments in American history from the pre-colonial time period to the present day. Students will be engaged in activities that call upon their skills as historians (i.e., recognizing cause and effect relationships, various forms of research, expository and persuasive writing, reading of primary and secondary sources, comparing and contrasting important ideas and events, using technology, and verbal presentation).

AP United States History
(1.0 credit; Prerequisite: Honors World Studies)
This course provides a challenging and unique study of United States History at the college level. Students in this course should expect to spend a significant amount of time on homework and independent study. A typical week might include 40-60 pages (1-2 chapters) of textbook reading in addition to other primary and secondary readings. Throughout the year, students will see improvement in their reading, writing, critical thinking, and analytical skills. As a result of this course, students will be prepared for the AP examination in May.

The Civics requirement can be met with either the Honors Civics course or the AP U.S. Government and Politics. Honors Civics is a semester course that is paired with either Honors Global Issues or Honors Sociology which are semester courses. The AP U.S. Government and Politics is a full year course.
Honors Civics
(.5 credit; Prerequisite: Honors World Studies and US History credit)

This course will encourage active engagement in our community at both the local and national levels. Students will analyze how movements have caused change in the past and how they can become part of the change they want to see. The course will explore the design of our government and the rights provided but the focus will be more about how to be involved in creating or promoting positive change. One of the two CPS service learning requirements will be met in this course. The course will be paired with a semester of either Sociology or Global Issues which are explained below.

Honors Global Issues
(.5 credit; Prerequisite: Honors World Studies credit and US History credit)

This course may be chosen as the second half of the Civics requirement. This course challenges students to think about the world around them and to become agents of change. Issues of sustainability and conflict will be analyzed as well as the cultures of the world. Each semester will rotate current topics. Current events related to several different themes will be addressed. Students will utilize problem-based learning and will have access to journalists and other experts when exploring issues.

Honors Sociology
(.5 credit; Prerequisite: Honors World Studies credit and US History credit)

This course may be chosen as the second half of the Civics requirement. This is an integrated course that covers the main topics of both psychology and sociology. It will focus on the psychological study of human behavior and its relationship to sociological topics. Students will develop an understanding of major core concepts of sociology, and apply these concepts to their own lives and modern day society. It will focus on the psychological study of human behavior such as personality, development and psychological disorders and its relationship to sociological topics. Students will learn how to become more reflective of themselves, their community, and their society.

AP U.S. Government and Politics
(1.0 credit; Prerequisite: World Studies credit, Honors/AP US History credit)

In this course students will focus on the philosophical and institutional foundations of the American political system. Particularly, students will investigate the various roles that the Constitution, public opinion, political parties, campaigns and elections, interest groups, the media, and the various institutions of the federal government—the executive, legislative, and judiciary branches, as well as the bureaucracy—play in the development of federal public policy. Students will assess the validity of various political theories by considering a range of historical and contemporary political events. Students will participate in the American Constitutional Law Program, in which they will investigate the numerous constitutional questions posed by a current U.S. Supreme Court case. Students will write a persuasive appellate brief and defend their legal arguments in front of a panel of justices. As a result of this course, students will be prepared for the AP Examination in May.

Elective Courses: AP Level

AP European History
(1.0 credit; Prerequisite: Honors World Studies credit, Honors/AP US History credit)

This course introduces students to the modern history of the Western world. It is designed to help students develop their writing, reading, and analytical skills. Students are expected to show knowledge of a basic chronology from the Late Middle Ages to the very recent past. The areas of concentration include historical, political, and economic history coupled with an intense study of cultural and intellectual institutions and their development. During the year, AP European History students should anticipate 1-3 hours of textbook reading per week; in addition, students will also be expected to read primary and secondary source documents throughout the year in preparation for the DBQ portion of the AP Exam. As a result of this course, students will be prepared for the AP examination in May.
AP Human Geography
(1.0 credit; Prerequisite: Honors World Studies credit, Honors/AP US History credit)

Why are malls placed near highways? Why do fewer people vacation in the Caribbean between June and September? Why are there Korean store signs along Bryn Mawr and Kedzie? So many decisions that humans make depend upon geography, which is about places, not just place names. In this course, students will look at how spatial patterns and processes reflect and shape human activity locally and globally. In essence, we will be asking three questions about the world: what is where, why is it there, and why should we care? As a result of this course, students will be prepared for the AP examination in May.

AP Microeconomics
(1.0 credit; Prerequisite: Honors World Studies credit, Honors/AP US History credit)

Does it make sense to design computer components in the United States but assemble computers in Asia? Is gasoline too inexpensive, even at $4.00 per gallon? Can a minimum wage cause more harm than good? If the price of Coca-Cola increases, why would you purchase more Coke? What's the fundamental flaw of U.S. drug interdiction policy? AP Microeconomics, like all social science courses, examines human behavior. The course, in answering these and many other questions, will underscore that in the face of scarcity – resulting from limited resources coupled with, often, limitless demand on those resources – choices must occur. Students will examine how individual decision-makers—consumers, producers, organizations—behave when confronting scarcity. Using concepts of demand, supply, opportunity cost, efficiency, equity, comparative advantage, incentives, transaction costs, and property rights, students will explore methods by which economic decisions occur, and resources are allocated, in a world of scarcity. The course will place heavy emphasis on application of economic theory to practice through project-based and experiential learning. The state mandated Consumer Education credit is met by this course. As a result of this course, students will be prepared for the AP Examination in May.

AP Psychology
(1.0 credit; Prerequisite: Honors World Studies credit, Honors/AP US History credit)

This course introduces students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Major topics include the various perspectives from which psychologists view behavior and mental processes. They range from a study of the brain and child development to personality and psychological disorders. Students will be required to complete a summer reading assignment, a service-learning project related to a specific psychological perspective, and a year-long problem-based learning project concerning an abnormal psychological disorder. After the AP exam, the course will focus on sociological concepts. As a result of this course, students will be prepared for the AP Examination in May.

** Please note that while the Social Science Department does not require approvals for any courses, they do offer the following recommendations when choosing courses:

When considering AP courses, we strongly recommend these guidelines:
AP Courses require learning skills that may not have been acquired yet or you may not have demonstrated consistently in your current Social Science course. They also will demand personal time management and self-direction in learning along with a strong work ethic. A student should expect collegiate level reading, including advanced content, vocabulary, pace and volume. In preparation for the culminating AP exams, each curriculum aims towards mastering specific writing and analytical thinking skills. Growth and success in an AP course calls for a level of maturity when dealing with academic setbacks, as well as a capacity to learn from constructive criticism.

When considering honors courses we strongly recommend these guidelines.
Honors courses cover topics more thematically than specifically. Students should expect project based learning that covers content in an analytical way that may not always go into depth. Courses include a flexible curriculum since there is no national exam to prepare for which allows time for more connections of content to current events or students’ lives. There is a rigorous amount of reading and writing that will require developing writing, research, analytical and communication skills. The pace of the courses are slower than an AP but each curriculum challenges students to read, do their own research and writing, and work with primary sources as they develop towards mastering Social Science skills.
**Science Department**

**Course Descriptions**

**Core Courses**

**Honors Physics**  
(1.0 credit)  
This course is concerned with the fundamental principles of nature. The historical and cultural perspective of physics will be integrated along with the implications of physics in our expanding technological universe. Topics covered will include motion, force, energy, momentum, concepts in astronomy, the dynamics of sound and light, electricity, and magnetism.

**Honors Chemistry**  
(1.0 credit; Prerequisite: Honors Physics credit)  
This course studies the physical and chemical property of matter, chemical reactions, changes in matter and energy, elements and compounds (structure, bonding, and reactivity) and chemical issues and problems. Hands-on laboratory activities are provided to strengthen understanding of concepts in chemistry.

**Honors Biology**  
(1.0 credit; Prerequisites: Honors Physics and Honors Chemistry credits)  
This course enables students to understand and appreciate the importance of biology by examining the diverse systems of life. Emphasis will be placed on the molecular basis of life and include investigations in biochemistry, cell biology, genetics, molecular biology, evolution, and the changing environment.
Elective courses

Honors Astronomy
(1.0 credit; Prerequisites: Honors Physics and Honors Chemistry credits)
This course investigates the story of our universe and the principles that govern its structure and evolution. Topics include the sky and celestial motions, the Copernican revolution, telescopes, gravity and orbits, the solar system and its formation, asteroids, meteors and comets, life cycles of stars, supernovae and creation of elements, the Milky Way and galaxies, distances of planets, stars and galaxies, expansion of the universe, big bang cosmology.

Honors Organismal Biology
(1.0 credit; Prerequisites: Honors Physics, Honors Chemistry, and Honors Biology credits)
This course challenges students to utilize scientific reasoning to better understand and explore the world around them. Current issues in science will be investigated by incorporating current scientific research, the scientific method, scientific literacy and academic discussions. Relevant science topics will rotate each semester.

**AP Biology
(1.0 credit; Prerequisites: 11th grade, Honors Physics, Honors Chemistry and Honors Biology credits. Letter grade of A in Honors Biology)
This course serves as an introductory college level biology course designed to acquaint students with an in-depth understanding of the foundations of life. Laboratory investigations will follow the requirements set by the College Board. The topics included will cover molecular and biochemical pathways, cellular processes, heredity, diversity of life, and population studies. An integrated approach to problem solving is incorporated to support the basic skills needed to grasp the dynamics of an advanced placement course.

**AP Chemistry (Double Block)
(1.0 credit A.P. Chemistry and 1.0 credit A.P. Chemistry Extended; Prerequisites: 10th grade, Honors Physics and Honors Chemistry credits. Letter grade of high B or A in Honors Chemistry)
This course serves as a college-level chemistry course focusing on topics such as thermodynamics, thermochemistry, physical behavior of gases, states and structure of matter, chemical equilibrium and kinetics, and various chemical reactions. Laboratories will be based on the recommendations of the College Board. Emphasis will be given in order to develop an increased competency in solving chemical calculations and problems.

**AP Environmental Science
(1.0 credit; Prerequisites: 10th grade, Honors Physics and Honors Chemistry credits. Honors Biology credit or concurrent registration.)
This course serves as a college-level course revolving around the interdependence of various systems on Earth, both nonrenewable and renewable resources, consequences of pollutants, social and political issues, conservation, and concerns for the future. Laboratory and field studies will follow the recommendations set by the College Board. Students will be expected to collect data outdoors on a regular basis. This is an activity-based course that will challenge students to evaluate the issues concerning the impact of science on the environment.

**AP Physics Year I
(1.0 credit; Prerequisites: 10th grade, Honors Physics credit. Honors Advanced Algebra with Trigonometry credit or concurrent registration)
This course provides a survey of the main principles of physics focusing on conceptual understanding and problem-solving ability using algebra and trigonometry. This course provides a foundation in physics for students in the life sciences, pre-medicine, and some applied sciences, as well as other fields not directly related to science, but is not the usual preparation for more advanced physics and engineering courses. The course expands upon the topics covered in the first year course and new topics: fluid dynamics, thermodynamics, waves and optics, and atomic and nuclear physics.

**AP Physics C (Mechanics)
(1.0 credit; Prerequisites: 10th grade, Honors Physics and AP Calculus credit or concurrent registration)
Course Description: A college level course that offers a more analytical approach to Newtonian Mechanics. A student in an AP Physics C course should be able to analyze a problem or phenomenon verbally, mathematically, and graphically. Laboratories will be based on the recommendations given by the College Board. Topics covered include motion, forces, energy, momentum, and rotational dynamics.
### NOTES:
Incoming freshmen students with CPS approved high school science credit(s) for any courses in our core sequence will be registered for the next corresponding course in the sequence. Any further questions should be directed to the department chair.
Course Descriptions

Honors Algebra
(1.0 credit)
The first year Integrated Math curriculum contains an introduction to problem solving and equation solving strategies, the use of variables, and the meaning and use of functions and graphs, as well as concepts from geometry, statistics, and probability. These mathematical ideas are set in varied contexts such as the settlement of the American West, games of chance, maximization of profits for a cookie store, and Edgar Allen Poe’s "The Pit and the Pendulum."

Honors Geometry
(1.0 credit; Prerequisite: Honors Algebra I)
Students work with powerful mathematical ideas, including the Pythagorean Theorem, trigonometry, the chi-squared statistic, and coordinate geometry. Problem contexts include the geometry of the honeycomb, maximizing area given a particular perimeter, the growth of a circular orchard, and statistical comparisons of populations.

Honors Advanced Algebra with Trigonometry
(1.0 credit; Prerequisite: Honors Geometry)
Students extend their understanding of concepts studied in preceding years of the curriculum, while learning about and applying new topics such as derivatives, algebra of matrices, and circular functions. Population growth, decision-making on land use, and a Ferris wheel circus act provide some of the contexts for the mathematical concepts such as exponential functions, trigonometric functions, and binomial distribution.

Honors Pre-Calculus
(1.0 credit; Prerequisite: Honors Advanced Algebra with Trigonometry)
First semester requires students to use function analysis for polynomial, logarithmic, exponential and advanced trigonometric functions. Second semester includes additional pre-calculus material including parametric equations, polar equations, sequences and series and an advanced statistics unit in which students work with such concepts as sampling, the binomial distribution, normal distribution and confidence intervals.

**AP Statistics
(1.0 credit; Prerequisite: Letter grade of A or B in Honors Advanced Algebra with Trigonometry)
Students are introduced to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: exploring data, planning a study, anticipating patterns, and statistical inference. The course follows the syllabus as defined by the College Board.

**AP Calculus AB
(1.0 credit; Prerequisite: Letter grade of A or B in Honors Pre-Calculus; or letter grade of A or B in Honors Advanced Algebra with Trigonometry and letter grade of A or B in summer school Honors Pre-Calculus)
The course follows the syllabus of AP Calculus AB and includes such topics as limits, derivatives, and integration. Application of topics to problem situations is a core component of the course as is treatment of topics from multiple points of view: graphical, numerical, and analytical. Technology plays a key role in developing conceptual understanding throughout the course.

**AP Calculus BC
(1.0 credit; Prerequisite: Letter grade of A in Honors Pre-Calculus)
The course follows the syllabus of AP Calculus BC and covers the equivalent of two semesters of college calculus. It includes such topics as limits, derivatives, integration, parametric, polar, and vector functions. Application of topics to problem situations is a core component of the course as is treatment of topics from multiple points of view: graphical, numerical, and analytical. Applications of integrals and polynomial approximations and series will also be covered. Technology plays a key role in developing conceptual understanding throughout the course.
**Honors Linear Algebra/Differential Equations (NOT OFFERED IN 2020-2021; WILL BE OFFERED IN 2021-2022)**
(1.0 credit; Prerequisite: Letter grade of A or B in AP Calculus AB or BC and recommendation of Math Department)
The semester covering Linear Algebra will examine matrix theory and linear algebra. Students will explore how to use matrices to model and learn the theory behind solving systems of equations. As much as possible, emphasis will be given to topics that are helpful in other areas of mathematics, engineering, science, and social science. Topics covered include solving systems of equations, vector spaces, determinants, eigenvalues, and transformations.

The semester covering Differential Equations will build on the study of calculus by applying the ideas and techniques of calculus to our everyday lives. Focus is on formulating differential equations and interpreting their solutions. A major approach of this course is qualitative use of slope field, graphs, vector fields, and solution curves in the phase plane as tools to gain a better understanding of solutions. Computer- and web-based tools are used to investigate the behavior of solutions of differential equations. Numerical and qualitative investigations are used to understand the geometry and long-term behavior of solutions. Concepts such as first-order equations, systems of first-order equations, and nonlinear equations are investigated throughout the course.

**Honors Multivariable Calculus (NOT CURRENTLY OFFERED IN 2019-2020; WILL BE OFFERED IN 2020-2021 AND 2022-2023)**
(1.0 credit; Prerequisite: Letter grade of A or B in AP Calculus AB or BC and recommendation of Math Department)
This course will continue the study of calculus by investigating the calculus of multivariate functions. This includes an introduction to functions of multiple variables using various coordinate systems and graphs in two, three and more dimensions. The calculus of these functions will be explored. Concepts such as derivatives, optimization, and integrals in the context of multivariable functions will be studied.

**Honors Discrete Math**
(1.0 credit; Prerequisite: Limited to seniors only)
This course will continue the study of advanced topics not covered in Pre-Calculus. Topics may include game theory, code theory, logic, non-Euclidean geometry and various topics from statistics such as the central limit theorem. Students will be exposed to the historical context of some of the world’s greatest mathematical problems.
Course Descriptions

Chinese Courses

Honors Chinese I
(1.0 Credit)

Chinese I is an elementary course, designed for students who have no formal background in learning Chinese. It introduces the Chinese (Mandarin) phonetic system, basic grammatical structures, functional daily language use, and covers about 200 characters and associated phrases. It emphasizes the training of all four language skills (listening, reading, speaking, and writing) as well as understanding of the socio-linguistics and socio-cultural factors that are important to cross-cultural communication. The general teaching and learning objectives of Chinese language courses include 1) to introduce the knowledge of the knowledge about the Chinese language; 2) to teach learners how to learn a foreign language and culture; and 3) to promote learners’ cross-cultural understanding and communicative skills. The classroom activities are student centered, task based, and proficiency oriented. Computer input methods will be emphasized.

Honors Chinese II
(1.0 Credit; Prerequisite: Chinese I)

Chinese II continues to focus on the introduction to the Chinese language grammatical system as well as the functional use of the language. It develops learners’ communicative competence from general description of events to specific descriptions, from sentences to discourses with contexts, from simple expressions to complex structures. The learning activities encourage cooperative learning, use of information technology, and creative learning and thinking.
Honors Chinese III
(1.0 Credit; Prerequisite: Chinese II)
Chinese III is an intermediate level Chinese language course that introduces sophisticated topics and emphasizes using of authentic materials. Cultural learning and development of insight into the nature of the language and culture are integrated into the curriculum. Students are expected to reach higher levels of proficiency in the target language.

Honors Chinese IV
(1.0 Credit; Prerequisite: Chinese III)
Chinese IV is an advanced Chinese language course that emphasizes the transition from using spoken language to its formal written forms. Texts from the Chinese contemporary literature, TV programs, and related internet sites will be used as reading and listening materials. Performing scripts, in-depth discussions, and written reports in Chinese will be developed as individual or group projects.

**AP Chinese and Culture**
(1.0 Credit; Prerequisite: Chinese III/IV)
The AP Chinese Language and Culture course is in alignment with national standards which emphasize proficiency in “5 Cs” and language skills across the three communicative modes. It aims at thoroughly and effectively integrating cultural content knowledge and language skills, providing for the frequent formative assessment of students’ developing proficiencies within the context of their learning. The content begins with fundamental aspects of daily life, progresses through topics surrounding Chinese family and societal structures over the six main themes of AP world languages and finally culminates in national and international perspectives. The course examines the expanding spheres of influence in Chinese life. General testing strategies and skills as well as use of computer for testing will also be an important and unavoidable part of the course. The instructional materials and activities are carefully and strategically chosen to support the goals of the course.

Honors Chinese V
(1.0 Credit; Prerequisite: Chinese IV/AP)
Chinese V focuses on reading and writing. The reading emphasizes various styles of authentic materials in Chinese such as newspaper articles, prose, and short stories, also materials in traditional versions of Chinese characters in order to enhance students’ reading capacity. The topics and styles of writing assignments cooperate with styles and content of reading. Oral discussion on themes and styles before each writing is also an important part of the prerequisite. Social variations and cultural understanding and appreciation are integrated aspects of learning. A portfolio of student's writing is part of the assessment of overall proficiency and improvement.

French Courses

Honors French I
(1.0 Credit)
The French curriculum uses a graduated immersion model. This course is based on National Standards such as the three modes of communication: interpersonal, interpretive, and presentational. The themes and grammar of each level are scaffolded to support the AP curriculum. Subthemes: Greetings/Leave-takings, school life, friends and family, interests and hobbies, holidays/celebrations, and clothing

Honors French II
(1.0 Credit; Prerequisite: French I)
The French curriculum uses a graduated immersion model. This course is based on National Standards such as the three modes of communication: interpersonal, interpretive, and presentational. The themes and grammar of each level are scaffolded to support the AP curriculum. Subthemes: travel and vacation, household objects and responsibilities, health and eating habits, use of technology and devices
Honors French III  
(1.0 Credit; Prerequisite: French II)  
The French curriculum uses a graduated immersion model (this class is taught in French). This course is based on National Standards such as the three modes of communication: interpersonal, interpretive, and presentational. The themes and grammar of each level are scaffolded to support the AP curriculum. Subthemes: professions and the working world, technology, environment, the arts

Honors French IV  
(1.0 Credit; Prerequisite: French III)  
The French curriculum uses a graduated immersion model (this class is taught in French). This course is based on National Standards such as the three modes of communication: interpersonal, interpretive, and presentational. The themes and grammar of each level are scaffolded to support the AP curriculum. Subthemes are taken from the AP subthemes (see below).

**AP French Language and Culture  
(1.0 Credit; Prerequisite: French III/IV)  
The AP French Language and Culture course builds on students’ previous knowledge as they develop the productive, receptive and cultural skills necessary to communicate with French language speakers (this class is taught in French). This course is based on National Standards such as the three modes of communication: interpersonal, interpretive, and presentational. Also, the course includes grammar review, which is reinforced and built upon through reading of literature, articles, short stories and written communication in target language. If students take this course, they may take the AP French test. Subthemes: global challenges, science and technology, contemporary life, personal and public identities, family and communities, arts and aesthetics

Honors French V  
(1.0 Credit; Prerequisite: French IV/AP)  
This course is an accelerated version of French IV and a complement to AP French. It is an advanced course designed to enhance the language skills students already learned in French I-IV. This course is usually taught exclusively in French and all students are expected to use French in every aspect of language learning.

Japanese Courses

Honors Japanese I  
(1.0 Credit)  
Students will learn the Japanese language through the four basic languages skills, listening, speaking, reading, and writing that will help them to communicate with other Japanese speakers. Students will learn the basic three Japanese character systems: Hiragana, Katakana, and Kanji (Chinese character: 80 characters) with phonetic practicing. Students will acquire basic vocabulary, sentence structure, tense, and verb and adjective conjugation. First year in Japanese, students will learn about greetings, numbers, dates, family, hobby, body parts, shopping, and useful classroom expressions. Furthermore, students will be exposed to Japanese culture with visual and reading materials for smooth communication and understanding of the culture.

Honors Japanese II  
(1.0 Credit; Prerequisite: Japanese I)  
This course carries on the work of the first year, allowing students to maintain, refine, and further develop the skills of four basic skills at increasing levels of difficulty. In this course, students will learn more oral communication and reading skills. Students will learn verb and adjective conjugation, which is the biggest formula form in Japanese. Moreover, students will learn more reading skill with authentic Japanese materials and more Kanji (Chinese character: 160). Students will interact in Japanese in limited setting and begin to understand the fine arts of the Japanese societies.

Honors Japanese III  
(1.0 Credit; Prerequisite: Japanese II)  
Students will learn sophisticated sentence structure and vocabulary at an intermediate level. Reading literary texts of interest to students and exercises in written expression are greatly expanded. Students will use Japanese to communicate within and beyond the classroom setting such skits, and making stories. Students will extend the number of Kanji (Chinese character: 160) and begin to explore literary works and focus on writing in Japanese. Also, students will develop and understand the Japanese customs.
Honors Japanese IV
(1.0 Credit; Prerequisite: Japanese III)

This course includes intensive reading of literary texts with emphasis on style and intensive grammar review and continued writing practice using themes from the texts that are being read in the class. Students will interact in Japanese in various setting and understand written passages from sources such as Japanese newspapers. Students will extend the number of Kanji (Chinese character: 160) and write the Kanji in various situations. They will also study the history of areas where Japanese is spoken.

**AP Japanese Language and Culture**
(1.0 Credit; Prerequisite: Japanese III/IV)

This AP Japanese Language and Culture course builds on students’ previous knowledge as they develop the productive, receptive, and cultural skills necessary to communicate with Japanese language speakers. This course is based on National Standards such as the three modes of communication; interpersonal, interpretive, and presentational. Also, the course includes grammar review, which is reinforced and built upon through reading of literature, articles, short stories and written communication in target language. If students take this course, they may take the AP Japanese test.

Latin Courses

Honors Latin I
(1.0 Credit)

The Honors Latin 1 class introduces students to the Latin language, as well as the history, culture, literature, and mythology of the ancient Romans. Latin language study bolsters students’ understanding of the mechanics and structure of English (and other primary languages), enhances English vocabulary, and begins to prepare them to read influential Latin texts in the original language of composition. In accordance with contemporary Classical Language Learning Standards, students acquire not only elementary reading and writing skills but also basic oral communication skills (e.g., greetings, questions, commands) and vocabulary (e.g., animals, body parts, days of the week, weather terms, rooms of the Roman house and baths). The study of Latin grammar and vocabulary is supplemented regularly with readings, documentaries, and other sources highlighting the profound influence of the Romans on all aspects of modern life: socio-political, philosophical, and artistic. In Latin I, students focus, in particular, on the Roman Monarchy and Republic (753-27 B.C.). Individual research, oral presentations, and art projects permit students to demonstrate understanding of the rich context from which the Latin language arose.

Honors Latin II
(1.0 Credit; Prerequisite: Latin I)

The Honors Latin II class completes the study of essential grammatical concepts, while deepening students’ knowledge of the ancient Romans. By the end of this course, students will have mastered all declensions of nouns and those of most pronouns; all tenses and moods of verbs, both active and passive; and complex grammatical structures using participles, infinitives, and subjunctive verb forms (e.g., ablative absolutes, periphrastics, indirect statement, purpose and result clauses). Through translation of increasingly difficult Latin passages (including original ancient texts), as well as composition assignments in Latin, students hone their Latin comprehension and communication skills. The study of Latin grammar and vocabulary is again supplemented regularly with readings, documentaries, and other sources highlighting the profound influence of the Romans on all aspects of modern life: socio-political, philosophical, and artistic. In Honors Latin II, students focus more on the period of the Roman Empire (27 B.C. - 476 A.D.). Individual research, oral presentations, and art projects permit students to demonstrate understanding of the rich context from which the Latin language arose.

Honors Latin III & IV
(1.0 Credit; Prerequisite: Latin II/III)

The Honors Latin III/IV class introduces students to the world of Latin literature, even as they continue to solidify their mastery of Latin vocabulary, grammar, and syntax through both reading and writing in Latin. Although the literary selections change from year to year based on student and teacher interest, prose works such as the speeches of Cicero and Petronius’ Satyricon (the first novel in Western literature) and poetry from the likes of Catullus and Ovid (Metamorphoses) are standard fare. In these works, students will explore issues of genre, stylistic devices and themes, and literary analysis generally, as they translate original Latin texts and comment on their literary and historical significance through class discussion, individual and group presentations, art projects, and essays. N.B. This course may be offered every other year, in rotation with the AP Latin class.
**AP Latin**  
 *(1.0 Credit; Prerequisite: Latin II/III)*

The AP Latin course focuses on the in-depth study of selections from two of the greatest works in Latin literature: Vergil's *Aeneid* and Caesar's *Gallic War*. The course requires students to prepare and translate the readings and place these texts in a meaningful context, which helps develop critical, historical, and literary sensitivities. Throughout the course, students consider themes in the context of ancient literature and bring these works to life through classroom discussions, debates, and presentations. Additional English readings from both of these works help place the Latin readings in a significant context. If students take this course, they may take the AP Latin test. N.B. This course may be offered every other year, in rotation with the Honors Latin III/IV Latin class.

**Spanish Courses**

**Honors Spanish I**  
 *(1.0 Credit)*

Honors Spanish I presents and practices the basic language typical of the novice level. Students will learn skills in listening, writing, speaking, and reading as well as gain an insight into the way of life among the people in the different Spanish speaking countries. Students are taught to use the target language during class and are expected to use Spanish for all in-class communication. Students learn how to use Spanish for all in-class communication. Students learn greetings, expressions of courtesy, numbers, days, expressing likes and dislikes, the present, present progressive, and past tense (preterite) verbs conjugations and vocabulary dealing with real life situations. Reflexive verbs are introduced in the present tense. Asking and answering questions and making oneself understood in simple social situations are a part of this course. Class requires written and oral work, role-play, and group and pair work.

**Honors Spanish II**  
 *(1.0 Credit; Prerequisite: Honors Spanish I)*

This course builds on the listening, speaking, reading, and writing skills acquired in Honors Spanish I. The second year expands these skills as the student’s communication skills in the target language begin to encompass a greater number of topics. Emphasis continues to be on the student working entirely in the target language. Grammar focuses on verbs in the following tenses: past (preterite and imperfect), future, conditional, present perfect, imperfect progressive, and formal and informal commands. Vocabulary continues to be developed and student will be able to talk about such topics as travel, restaurant visits, shopping, recreation, and professions. Reading skills will be expanded through longer reading selections, cultural understanding is developed through reading selections and cultural topics presented. Role-play, group and pair work and written assignments continue to be emphasized.

**Honors Spanish III**  
 *(1.0 Credit; Prerequisite: Honors Spanish II)*

The third year student needs a great deal of grammar review. Grammar is reviewed and new grammar is presented. The present subjunctive mood as well as imperfect subjunctive are covered in-depth. The passive voice as well as relative pronouns are reviewed. Vocabulary is reviewed and expanded. Students continue to work entirely in the target language and reading skills continue to be developed through longer reading selections, which cover culture, literature or an excerpt from a newspaper. Comprehension items follow and require oral and written responses. Role-play and group and pair work continue to develop speaking skills.

**Honors Spanish IV**  
 *(1.0 Credit; Prerequisite: Honors Spanish III)*

This advanced language course builds on the solid foundation that was established during the first three years. The course is conducted entirely in Spanish and includes a grammar review, reading of literature, poetry, short stories and oral and written communication in the target language. Various aspects of Hispanic cultures are examined and discussed. The focus of this course is not only on speaking and understanding both oral and written Spanish with greater ease and fluency, but also on being able to communicate in greater detail about more topics both orally and in writing.

**AP Spanish Language and Culture**  
 *(1.0 Credit; Prerequisite: Honors Spanish III/IV)*

The AP Spanish language course builds on students’ previous knowledge as they develop the productive, receptive and cultural skills necessary to communicate with Spanish language speakers. This course is based on National Standards such as the three modes of communication: interpersonal, interpretive, and presentational. Also, the course includes grammar review, which is reinforced and built upon through reading of literature, articles, short stories, and written communication in the target language. If students take this course, they may take the AP Spanish test.
Computer Science Department

Exploring Computational Thinking

Graduation Requirement Options (May also be taken as Elective)

Media Computation

Electives

AP Computer Science Principles

AP Computer Science A

Web Page and Mobile App Development

Advanced Topics in Computer Science (Independent Study)

Elements of Digital Computing Systems (Next offered 2021-2022 School Year)

Database and SQL Programming (Next offered 2021-2022 School Year)
Course Descriptions

Honors Exploring Computational Thinking
(1.0 Credit)
Honors Exploring Computational Thinking is designed to introduce students to the breadth of the field of computer science. The goal of Exploring Computational Thinking is to teach students the creative, collaborative, interdisciplinary, and problem-solving nature of computing in a way that is relevant to every student’s life and career interest. In this course, students will delve into real-world issues in computing, from learning programming and developing websites, to discussing digital citizenship and the societal and ethical issues surrounding the use of computers in our lives. The course contains the following units: Human Computer Interaction, Problem Solving, Web Design, Programming, Data Modeling, and Robotics. [ECS Partnership: http://www.exploringcs.org/] This course is better suited for freshmen and sophomores and meets the CPS high school graduation requirement.

Honors Media Computation
(1.0 Credit; Prerequisite: Algebra)
Concepts of Computer Science and programming are taught including algorithmic design and object-oriented programming using Python. Programming skills and conceptual understanding are developed through a problem solving approach. Students will create animations, games, and manipulate images, audio files, and other media forms through programming. This class is designed for first-time programmers and as an introduction to the Python language. Students will also have opportunities to explore the ethics of computing and the role of algorithms in our society. Get a head start on college requirements. Many majors now require at least one course in Computer Programming! No previous experience is necessary. This course is better suited for juniors, seniors, or by department approval and meets the CPS high school graduation requirement.

**AP Computer Science Principles
(1.0 Credit; Prerequisite: Algebra and department approval)
The AP Computer Science Principles course is designed to be equivalent to a first-semester introductory college computing course. In this course students will develop computational thinking vital for success across all disciplines, such as computational tools to analyze and study data and working with large data sets to analyze, visualize, and draw conclusions from trends. Students are encouraged to apply creative processes when developing computational artifacts and to think creatively while using computer software and other technology to explore questions that interest them. Students will develop communication and collaboration skills, working individually and collaboratively to solve problems. The course culminates in the Advanced Placement Computer Science Principles exam. This course meets the CPS high school graduation requirement.

**AP Computer Science A
(1.0 Credit; Prerequisite: One introductory Computer Science course or department approval)
This course emphasizes object-oriented programming (OOP) and design. This course will prepare students to take the AP Computer Science exam and covers topics typically found in a first semester college computer programming course. Students will learn how to problem solve and create software using the Java programming language. Course content is focused on learning the logic structures universal to most programming languages: loops, if statements, arrays, etc. Other topics include program design and implementation, algorithm analysis, and object-oriented programming design. This course is intended to serve both as an introductory course for computer science majors and for students who will major in disciplines that require significant involvement with computing.

**Honors Web Page and Mobile App Design and Development
(1.0 Credit; Prerequisite: One introductory Computer Science course or department approval)
This course covers various topics of Web design using forms, cascading style sheets, the Document Object Model, javascript, and App Inventor for Mobile App developments. The design portion also focuses on the elements and the processes of combining text, graphics and or multimedia for page-layout designs. Students will be using various applications and software packages to design and develop quality online documents and applications. Using Android phones, students will learn to design and create useful (and fun) phone applications.
Honors Database Design and SQL Programming

(1.0 Credit; Prerequisite: One introductory Computer Science course or department approval)

Oracle is the largest vendor of database systems in the world with the largest market share for both MS-Windows and Unix based databases. Oracle is also the second largest independent software company in the world. All 10 of the world's largest Web sites—such as Amazon.com and Yahoo!—use Oracle. Databases are a key technology used in a vast array of applications such as business data processing, decision support systems, expert systems, robotics, web storage, and indexing and searching. This course is a hands-on introduction to the principles, uses, and applications of relational database management systems (DBMS). The goal of the course is to prepare students to be sophisticated database users, applications programmers, and administrators. Students will be able to design and implement database system applications. Course will be offered for the 2021-2022 school year.

Honors Elements of Digital Computing Systems

(1.0 Credit; Prerequisite: Media Computation OR junior/senior with department approval)

This course is designed for students who have successfully completed Media Computation, and have a desire to explore how a computer is able to "think." Many CS students are missing the forest for the trees, and this course aims to restore the big picture. By gradually constructing and unit-testing a complete hardware platform and a modern software hierarchy from the ground up, students will discover how computer systems work, and how they are built. Students will apply some of the most important algorithms, data structures, and techniques learned in college-level CS courses. This course guides students through the construction of a modern, full-scale computer system (hardware and software) from first principles. Course will be offered for the 2021-2022 school year.

**Honors Advanced Topics in Computer Science

(1.0 Credit; Prerequisite: Junior/Senior status, AP Computer Science A, Elements of Digital Computing Systems and/or department approval)

Advanced Topics in Computer Science-Independent Study is offered for juniors or seniors who have completed the first three computer science courses and wish to continue their computer science study. Students may select their topic based on their interests or future college or career pursuits. Topics must be approved by the department. Course work will be self-directed under the approval and direction of a member of the Computer Science Department.
Visual Arts Course Descriptions

**Honors Art I**
(1.0 credit)

In this introductory class students learn the language and processes requisite to understanding art while exploring these concepts in their own art-making. Students are positioned as practicing artists and will be guided through the process of creating aesthetically and conceptually successful artworks that fit into a contemporary arts context. Students work in a variety of media and techniques to create drawings, paintings, sculptures, prints, ceramic art, and graphic designs. Additionally, students learn about the art of diverse cultures and time periods.

**Honors Art I³**
(1.0 credit; Prerequisite: Incoming freshmen only, portfolio review required)

This more advanced version of Art I is open only to incoming freshmen, and is designed for the student who already exhibits a passion and talent in the visual arts. This class differs from Honors Art I in that all three art teachers will teach this class, leading advanced level projects in their area of expertise. In contrast to Honors Art I, a major component of the class is the 20-Hour Project, which is a self-directed, independent project that students create outside of class each semester.

****Honors Ceramics I**
(1.0 credit; Prerequisite: Honors Art I/Honors Art I Cubed)

In this intermediate level studio class, students explore the creative possibilities of ceramics. Students create both sculptural and functional forms in clay, using hand-building and wheel throwing techniques. Creative play, material experimentation, and contemporary practices are encouraged. A variety of glazing and decorating techniques will be taught, as well as alternative firing processes such as barrel and raku firing. A major component of the class is the 20-Hour Project, which is a self-directed, independent project that students create outside of class each semester.
**Honors Ceramics II**  
(1.0 credit; Prerequisite: Honors Ceramics I)  
In this advanced level studio class, students continue to explore the creative possibilities of ceramics. Emphasis is on creating larger and more complex clay forms, using hand-building, casting, and wheel throwing techniques. Independent, self-directed projects are incorporated into the curriculum, as the students are encouraged to develop their individual conceptual focus and style. A major component of the class is the 20-Hour Project, which is a self-directed, independent project that students create outside of class each semester.

**Honors Ceramics III**  
(1.0 credit; Prerequisite: Honors Ceramics II)  
This course is a continuation of processes and work begun in Studio Ceramics II, with more emphasis on independent, self-directed projects. A major component of the class is the 20-Hour Project, which is a self-directed, independent project that students create outside of class each semester.

**Honors Digital Imaging I**  
(1.0 credit; Prerequisite: Honors Art I/Honors Art I Cubed)  
In this intermediate level class, students will explore basic design and communication concepts while learning to use the computer as an art and design-making tool. Students will learn to use professional graphic art applications like Adobe Photoshop and Adobe Illustrator. A major component of the class is the 20-Hour Project, which is a self-directed, independent project that students create outside of class each semester.

**Honors Digital Imaging II**  
(1.0 credit; Prerequisite: Honors Digital Imaging I)  
In this advanced level class, students will further explore the design and communication concepts begun in Digital Imaging I. Students will learn more advanced applications in using the computer as an art and design-making tool. A major component of the class is the 20-Hour Project, which is a self-directed, independent project that students create outside of class each semester.

**Honors Digital Imaging III**  
(1.0 credit; Prerequisite: Honors Digital Imaging II)  
In this advanced level class, students will further explore the design and communication concepts begun in Digital Imaging II. Students will learn more advanced applications in using the computer as an art and design-making tool. A major component of the class is the 20-Hour Project, which is a self-directed, independent project that students create outside of class each semester.

**Honors Drawing and Painting I**  
(1.0 credit; Prerequisite: Honors Art I/Honors Art I Cubed)  
In this intermediate level studio course, students explore the creative possibilities of drawing and painting. Students work from observation as well as imagination and learn to make material and compositional choices to create meaning in a work of art. Students work in a variety of techniques and media including pencil, charcoal, ink, watercolor, water-based oil paint and acrylic. A major component of the class is the 20-Hour Project, where students create an ambitious self-directed project outside of class each semester.

**Honors Drawing and Painting II**  
(1.0 credit; Prerequisite: Honors Drawing and Painting I)  
In this advanced level studio course, students further explore the creative possibilities of drawing and painting. Students work from observation as well as imagination and learn to make material and compositional choices to create meaning in a work of art. Students work in a variety of techniques and media including pencil, charcoal, ink, watercolor, water-based oil paint and acrylic. A major component of the class is the 20-Hour Project, where students create an ambitious self-directed project outside of class each semester.
**Honors Drawing and Painting III**

(1.0 credit; Prerequisite: Honors Drawing and Painting II)

This course is a continuation of processes and work begun in Studio Drawing and Painting II. Emphasis is placed on independent and self-motivated projects, including the 20-Hour Project.

**Honors Mixed Media I**

(1.0 credit, Prerequisite: Honors Art I/Honors Art I Cubed)

In this intermediate course, students will create works of art combining multiple 2-D and 3-D methods of making. We will explore the juxtaposition of materials and techniques to build meaning in works of art. Students will research mixed media artists, engage in critical discussions and explore how artist's process and intent impact their output. Projects may include collage based works, explorations in fibers and printmaking, performance based pieces and work that combines the analog and digital making processes. A major component of the class is the 20-Hour Project, which is a self-directed, independent project that students create outside of class each semester.

**Honors Mixed Media II**

(1.0 credit, Prerequisite: Honors Mixed Media I)

In this advanced course, students will continue their exploration of creating works of art combining multiple 2-D and 3-D methods that they began in Mixed Media I. We will explore the juxtaposition of materials and techniques to build meaning in works of art. May meet concurrently with Honors Mixed Media I. A major component of the class is the 20-Hour Project, which is a self-directed, independent project that students create outside of class each semester.

**Honors Mixed Media III**

(1.0 credit, Prerequisite: Honors Mixed Media II)

In this advanced course, students will continue their exploration of creating works of art combining multiple 2-D and 3-D methods that they began in Mixed Media II. We will explore the juxtaposition of materials and techniques to build meaning in works of art. May meet concurrently with Honors Mixed Media I & II. A major component of the class is the 20-Hour Project, which is a self-directed, independent project that students create outside of class each semester.

Honors Photography I

(1.0 credit; Prerequisite: Honors Art I/Honors Art I Cubed) - NOT CURRENTLY OFFERED

In this class students will learn about the history of photography and the photographic process. Students will be exposed to the portfolios of major and minor photographers and works; not only will they learn about photography, but they will also have the opportunity to create their own photos and installations. Students will learn how to use a manual camera and will develop an understanding of controlling exposure, focus and composition. This course will also offer students the opportunity to learn how to create and maintain a darkroom.

Processes include: photomontage, black and white printing processes, digital photography, Adobe Photoshop manipulation and other applications. Students supply their own 35mm (film) camera, film, and photo paper as well as miscellaneous supplies.

Honors Photography II

(1.0 credit; Prerequisite: Honors Photography I) - NOT CURRENTLY OFFERED

This course is a continuation of processes and work begun in Photography I.

**Honors Sculpture I**

(1.0 credit; Prerequisite: Honors Art I/Honors Art I Cubed)

In this intermediate level studio class, students will explore form and space through the creation of sculptural objects, installations, and performance art. Students will create both individual works and large scale collaborative pieces as they explore the relationship between form, media, and concept while working with a wide variety of sculptural materials and processes. Creative play, material experimentation, and contemporary practices are encouraged. A major component of the class is the 20-Hour Project, which is a self-directed, independent project that students create outside of class each semester.
**Honors Sculpture II**  
*(1.0 credit; Prerequisite: Honors Sculpture I)*  
In this advanced studio class, students further explore the creative possibilities of form and space through the creation of sculptural objects, installations, and performance art. Students will create both individual works and large scale collaborative pieces as they continue to explore the relationship between form, media, and concept while working with a wide variety of sculptural materials and processes. Creative play, material experimentation, and contemporary practices are encouraged, along with greater independence. A major component of the class is the 20-Hour Project, which is a self-directed, independent project that students create outside of class each semester.

**Honors Sculpture III**  
*(1.0 credit; Prerequisite: Honors Sculpture II)*  
This course is a continuation of processes and work begun in Honors Studio Sculpture II. Students will create both individual works and large scale collaborative pieces as they continue their exploration of form and space through the creation of sculptural objects, installations, and performance art. A major component of the class is the 20-Hour Project, which is a self-directed, independent project that students create outside of class each semester.

**AP Art History**  
*(1.0 credit; Prerequisite: Honors Art I/Honors Art I Cubed. Open to Juniors & Seniors only) - NOT CURRENTLY OFFERED*  
This non-studio based course explores such topics as the nature of art, its uses, its meanings, art making, and responses to art. Through investigation of diverse artistic traditions of global cultures from prehistory to the present, the course fosters in-depth and holistic understanding of the history of art from a global perspective. Students learn and apply skills of visual, contextual, and comparative analysis to engage with a variety of art forms, constructing understanding of individual works and interconnections of art-making processes and products throughout history. Students will be required to study, research and analyze artworks in order to prepare and take the AP Art History exam.

### Music Course Descriptions

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Beginning-level Ensembles

In the beginning-level courses, students will explore a variety of technical, expressive, and theoretical aspects of singing or playing an instrument. There is at least one performance opportunity each semester on campus. Students are required to participate in all dress rehearsals and performances. Such functions usually take place before or after school and are an essential component to the overall grade. No prior knowledge or experience in music is required. Descriptions for the three beginning options are listed below:

Honors Beginning Band
(1.0 credit)
This course is designed for the student with no formal prior experience performing on a band instrument. Students with prior experience (even if it was for 1 year) should audition for intermediate band. In this course, students will learn to play one of the following band instruments: (flute, oboe, clarinet, saxophone, bassoon, french horn, trumpet, trombone, baritone horn, tuba and percussion) Students will also learn the basics of music notation and theory, learn the piano keyboard, develop their tone and perform in two concerts during the year. The class will be taught in two sections - Brass /Percussion and Woodwinds. Students will be tested on all the instruments to determine their proficiency and placement.

Honors Beginning Orchestra
(1.0 credit)
This course is designed for students with no prior experience learning a string instrument (violin, viola, cello, or bass). Emphasis is placed on the refinement of playing technique and comprehension of musical rudiments. Blended learning approaches that include individual, small group and ensemble experiences, audio and video demonstrations and assessments, and use of web-based applications, seek to offer students in Beginning Orchestra a well-rounded experience that prepares them for further musical study.

Honors Beginning Treble/Bass Chorus
(1.0 credit)
This course is designed for students with no formal prior experience in vocal or choral studies. Students learn the fundamentals of healthy voice production, expressive musicianship, basic piano skills, and music reading (written and aural theory and notation). Learning and assessment includes individual, small group, and full-ensemble experiences, with opportunities for demonstrating growth during in-class coachings and video assessments. Students are prepared and inspired for continued participation in the choral class sequence and are confident to seek supplementary music-making opportunities both in and out of school.

Upper Ensembles for Brass, Wind, and Percussion Instruments

**Honors Intermediate Band
(1.0 credit; Prerequisite: Beginning Band or experience on a band instrument and audition)
In this course, students will further their musicianship by reviewing and/or learning music notation, note subdivision, meter and counting. Along with learning the piano keyboard, major scales and key signatures, they will also learn how to develop a refined tone. The Intermediate Band will also perform alongside the Advanced Band in concerts and band competitions. Performance in concerts and competitions is mandatory, and private lessons are recommended.

**Honors Advanced Band I, II, III, IV
(1.0 credit; Prerequisite: Intermediate Band or experience on a band instrument and audition)
In this course, students are expected to adhere to high standards regarding musical interpretation and tone in the preparation and performance of advanced concert band literature. Participation in solo and ensemble competitions, concerts, and band competitions is mandatory. Private lessons are strongly recommended.
**Honors Jazz Ensemble I, II, III, IV**  
(1.0 credit; Prerequisite: Intermediate Band or experience on a jazz instrument and audition. All guitarists, drummers and keyboardists need to have taken a performance ensemble (band, choir or orchestra) previously.)

In this course, students will learn to read and play jazz phrasings. In addition, students will learn the basics of swing, Latin, and rock and blues styles. Students will also study and practice the art of jazz improvisation. The Jazz Ensemble performs in concerts and competitions throughout the year. Upper level jazz classes learn more complex theory, technique and improvisations.

**Upper Ensemble Courses for Violin, Viola, Cello, and Double Bass**

**Honors Intermediate Orchestra**  
(1.0 credit; Prerequisite: Beginning Orchestra or experience on a string instrument, completion of Level 1 requirements (scales, rhythms) and successful audition with director)

This course is designed for students with one year of prior experience learning a string instrument (violin, viola, cello, or bass). Emphasis is placed on the sustained refinement of playing technique and comprehension of musical concepts. Blended learning approaches that include individual, small group and ensemble experiences, audio and video demonstrations and assessment and use of web-based applications, seek to offer students in Intermediate Orchestra a well-rounded experience that prepares them for further musical study. Participation in dress rehearsals, concerts, festivals and competitions is mandatory. Private instruction is highly recommended.

**Honors Advanced Orchestra I, II, III, IV**  
(1.0 credit; Prerequisite: Intermediate Orchestra or experience on a string instrument, completion of Level 2 requirements (scales, rhythms) and audition)

This course is designed for students with two or more years of prior experience learning a string instrument (violin, viola, cello or bass). Emphasis is placed on the sustained refinement of playing technique and comprehension of musical concepts. Blended learning approaches that include individual, small group and ensemble experiences, audio and video demonstrations and assessment, and use of web-based applications, seek to offer students in Advanced Orchestra a well-rounded experience that prepares them for further musical study. Participation in dress rehearsals, concerts, festivals and competitions is mandatory. Private instruction is highly recommended.

**Upper Ensemble Courses in Vocal/Choral Music**

**Honors Intermediate Chorus**  
(1.0 credit; Prerequisite: Beginning Chorus or at least one year of previous choral or instrumental music ensemble experience and successful audition which will assess sight-reading skills, and the student’s ability to match pitch)

Students learn the intermediate levels of voice production, expression of emotion and meaning through singing, and music reading. There is at least one performance opportunity each semester on campus and often performances off-site, as well. Additionally, the ensemble is encouraged to perform for community organizations, and collaborate with the Advanced Ensemble for large-scale works.

**Honors Advanced Chorus I, II, III, IV**  
(1.0 credit; Prerequisite: Intermediate Chorus or at least one year of previous choral or instrumental music ensemble experience and audition which will assess sight-reading skills, and the student’s ability to match pitch)

Students with advanced musical and vocal skills are encouraged to audition for this ensemble, which will perform regularly on campus, at state and regional festivals and competitions, and often collaborate with neighboring high schools and universities. This is the premier choral ensemble of the school, and performers are expected to attend all contests, dress rehearsals, and concerts, have excellent music reading and vocal performance skills. Many members are inspired to take advantage of other music experiences offered at Northside, such as the all-male group, “Sons of Anarkey,” the acapella group “Acafellas,” the NCP Chamber Singers, and the musical theater production.
Physical Education Department

Course Descriptions

Freshmen & Sophomore PE Classes

PE I: Freshman Physical Education and Health
(1.0 credit)

The curriculum enables students to experience a wide variety of physical activities. The year encompasses Adventure Programming; Fitness: Power walking, running, weight training, aerobic activities, fitness testing, and swimming; Lifetime Activities: softball, soccer, floor hockey, flag football, dance, and badminton.

Health is a 20-week program that encourages students to lead a healthier lifestyle as exemplified by the balanced elements of intellectual, physical, social, and emotional wellness.

PE II: Sophomore Physical Education and Driver Education
(1.0 credit)

The curriculum enables students to experience a wide variety of physical activities. The year encompasses Adventure Programming; Fitness: power walking, running, weight training, aerobic activities, fitness testing, and swimming; Lifetime Activities: softball, soccer, speedball, eclipse ball, lacrosse, volleyball, ultimate frisbee, and pickleball.

Driver Education is a ten-week classroom experience that will provide the student with the opportunity to develop lifetime driving skills. In addition, students will learn new skills that will be needed to manage the conflicts and risks associated with driving.

Junior & Senior PE Classes

**Junior Leaders Program
(1.0 credit; Prerequisite: PE I, PE II, application process and department approval)

In conjunction with adventure education, this program will include training of exercise fundamentals, fitness testing, and team sport skills and officiating. Students will become familiar with the department curriculum and develop teaching units with their peers. This course is a prerequisite for the Senior Leader Program.
Senior Leaders Program
(1.0 credit; Prerequisite: Junior Leaders)
A program which involves trained leaders assisting physical education instructor(s) with implementing exercise fundamentals, facilitating adventure education initiatives, fitness testing, team sport skills and officiating.

Advanced Weight Training I
(1.0 credit; Prerequisite: PE I, PE II)
This course will involve safety, improvement of muscular strength, advanced weight training practices, sports specific weight training, plyometrics, and proper nutrition. Both theory and practices will be emphasized and developed into a specific individualized program.

Advanced Weight Training II
(1.0 credit; Prerequisite: Letter grade of A or B in Advanced Weight Training I)
A variety of advanced weights training principles are introduced and skills in the basic lifts are reinforced. There is an emphasis on biomechanics, nutrition, and exercise physiology.

Dance I
(1.0 Credit; Prerequisite: PE I, PE II)
In this course, students will develop their artistic appreciation, creativity, strength, flexibility, compositional skills (choreography), body awareness, kinesthetic awareness, understanding of movement concepts and terminology, physical skills, and performance qualities. Students’ movement experiences will include technique work, movement combinations/phrases, improvisation, choreographic studies and performances (informal and public). In this year-long course students will learn the art, craft and science of dance. Contemporary/modern dance will be the main focus of the movement style, and ballet, jazz, yoga, and other cultural dance forms will be presented to enrich the students’ experiences in dance and movement. Periodic guest teachers, video-taped performances and live performances will enhance the curriculum. Class discussions will focus on artistic criticism and movement analysis. Students will be evaluated on effort, attendance, performance and progress in movement mastery.

Dance II
(1.0 Credit; Prerequisite: Dance I)
In this course, students will continue to develop their artistic appreciation, creativity, strength, flexibility, compositional skills (choreography), body awareness, kinesthetic awareness, understanding of movement concepts and terminology, physical skills, and performance qualities. Students’ movement experiences will include technique work, movement combinations/phrases, improvisation, choreographic studies and performances (informal and public). In this year-long course students will learn the art, craft and science of dance. Contemporary/modern dance will be the main focus of the movement style, and ballet, jazz, yoga, and other cultural dance forms will be presented to enrich the students’ experiences in dance and movement. Periodic guest teachers, video-taped performances and live performances will enhance the curriculum. Class discussions will focus on artistic criticism and movement analysis. Students will be evaluated on effort, attendance, performance and progress in movement mastery.

Lifetime Activities/ Team Sports
(1.0 credit; Prerequisite: PE I, PE II)
This course is designed to promote life-long leisure activities such as: rock climbing, badminton, pickleball, volleyball, basketball, swimming, soccer, ultimate frisbee, flag football, floor hockey, team handball, softball and golf. There will also be significant amount of time to work out and do cardio or strength training. There is an emphasis on skill development that will empower individuals for lifelong activity.
Senior Project

Senior Project is a capstone learning experience for students who have completed the most advanced coursework available at Northside. Often interdisciplinary in scope, students propose year-long independent, academic inquiries which may involve partnerships with external organizations, businesses, or universities. Senior Project is designed for students who have exhausted the offerings within a department of interest and are interested in pursuing a topic/idea in depth through research and a culminating public project and presentation.

AP Capstone

AP Seminar
(1.0 Credit; Prerequisite: junior standing; AP US History OR AP English Language and Composition; and an application process)

AP Seminar is a foundational course that engages students in cross curricular conversations that explore the complexities of academic and real world topics and issues by analyzing divergent perspectives. Using an inquiry framework, students practice reading and analyzing articles, research studies, and foundational, literary, and philosophical texts; listening to and viewing speeches, broadcasts, and personal accounts; and experiencing artistic works and performances. Students learn to synthesize information from multiple sources, develop their own perspectives in research-based written essays, and design and deliver oral and visual presentations, both individually and as part of a team. Ultimately, the course aims to equip students with the power to analyze and evaluate information with accuracy and precision in order to craft and communicate evidence-based arguments.

AP Research
(1.0 Credit; Prerequisite: AP Seminar)

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 (accompanied by a performance or exhibition of product where applicable) and a presentation with an oral defense.