



Please Note: All courses are two semesters, except where noted. Course offerings are subject to change. Classes may be cancelled if they do not meet minimum enrollment requirements.

Language Arts

American Literature

Students read selected short stories, novels, plays, and poetry from the United States (together with samples from the Americas) from the early beginnings of the country through contemporary literature. Historical forces impacting the literature as well as the regional influences are examined. The development of critical thinking and vocabulary building along with writing skills are emphasized.

English composition (one semester, fall)

This course emphasizes the planning, developing and revising of the five paragraph essay, which is essential to academic writing. Students practice the writing process while exploring correct forms for topic sentences, transitions, and thesis. Students are encouraged to write essays involving more complex thought processes. Revising rough drafts of essays is practiced throughout the course.

World Literature

This course utilizes readings from around the world in many different genres. Important short stories, novels, plays, poetry, and nonfiction from different countries and different time periods are studied and analyzed. Students practice writing about literature using correct grammar and expanded vocabulary. Class discussions encourage students to express opinions and support individual ideas from their readings.

Speech (one semester, spring)

Speech class introduces students to the basic concepts of speech communication, as well as giving instruction in public speaking. Students gain confidence and expertise as they practice delivering short speeches and longer presentations. Students interact with various elements of the English language, including vocabulary, diction, vocal intonation, and pronunciation. Intercultural communication and small group communication are also explored. Students gain helpful experience through classroom exercises such as interviewing for college entrance, applying for job opportunities, and participating in panel discussions.

Writing Workshop (one semester, fall)

Students acquire and develop writing skills needed for academic study at the high school level. In this course, students develop punctuation, capitalization, and grammar skills of the English language to construct complete sentences of varying length and complexity. Students look critically at word choice, descriptive imagery, and parallel structure, enabling their sentences to mature. Students also use basic annotation to examine short readings and write reading responses. By the end of the course, students are able to write paragraphs around a clear main idea and produce a three paragraph essay.

Mathematics

All math courses require the use of a TI – 83+, TI-84 or TI-84+ calculator. Students should have their own GRAPHING calculator. (NOTE: Faculty can provide only limited assistance on non-TI calculators).

Algebra I (per skill level)

Course includes the study of integers, rational numbers, equations and inequalities, polynomials and factoring, rational expressions, relations and functions, linear equations and their graphs, quadratic equations and radical expressions. Problem solving and applications will be emphasized throughout. Technology is used where appropriate.



Algebra II (per skill level)

NOTE: ALGEBRA I AND GEOMETRY USUALLY PRECEDE THIS COURSE.

This course expands on the topics introduced in Algebra I. Functions, inverses, composite functions, and transformations are introduced. Introduces the concepts of higher degree polynomials, and logarithmic and exponential functions. Probabilistic and statistical concepts are introduced and explored in addition to trigonometric functions. Problem solving activities, connections between algebra, trigonometry and other areas of mathematics as well as real world applications will be explored. Technology is integrated throughout.

Pre-Calculus (per skill level)

This course is designed to prepare students for a course in Calculus and is recommended for students who are above average in mathematics. THE CLASS IS STRONGLY DEPENDENT ON CALCULATOR USE – see the note above. Topics covered include equations and inequalities, functions and graphs, polynomial and rational functions, exponential and logarithmic functions, trigonometry, trigonometric identities, analytic geometry, 3-dimensional functions, matrices, statistics and probability, and (if time permits) an introduction to limits. Technology is fully integrated throughout.

AP Calculus (per skill level)

Prerequisites for this course include courses in which students have studied algebra, geometry, trigonometry, analytic geometry and elementary functions. Students should be familiar with linear, polynomial, rational, exponential, logarithmic, trigonometric, inverse trigonometric, and piecewise-defined functions. Students should also be familiar with the properties of functions, the algebra of functions, the graphs of functions and have some understanding of the language of functions – domain, range, periodic, symmetric, zeroes, intercepts, etc., - and know the values of the trig functions for $0, \frac{\pi}{6}, \frac{\pi}{4}, \frac{\pi}{3}, \frac{\pi}{2}, \pi$, and their multiples. This course requires the use of a graphing calculator. Students will be instructed in the use of the calculator and are expected to use it in completing homework, class work, and on the tests. The course covers the following topics – functions, graphs and limits, continuity, derivatives at a point and as a function, related rates of change, properties of integrals, Fundamental Theorem of Calculus, techniques of anti-differentiation, numerical approximations to definite integrals including trapezoidal and Simpson's rule, and the application of integration and differentiation to real world problems. Further topics may include L'Hopital's rule, Taylor and Maclaurin series, polar integration. Students are expected to sit for the AP exam in May.

Science

Biology

The first semester examines broad conceptual themes in life science, emphasizing particularly genetics, but also including adaptation, ecology and structure-function relationships. The second semester work deals with the myriad approaches which various organisms have used to deal with survival problems such as energy acquisition, predation, mobility and reproduction. An AP option is available, but it requires considerable outside reading and extended laboratory time.

Chemistry

During the first semester, students explore atomic theory, radioactivity and the behavior of elements and simple molecules in isolation. During the second semester, students explore chemical interactions including redox reactions and various forms of chemical bonding. There is an exposure to organic chemistry.

Physics

Physics is the study of the relationships between matter and energy. In the fall semester, students develop scientific skills as they study kinematics, forces, the laws of motion, work, energy, momentum, collisions, rotational motion, and gravity. In the second semester, students investigate temperature, heat, waves, sound, light, electricity, circuits, and magnetism.



AP Environmental Science

The goal of the AP Environmental Science course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. Environmental science is interdisciplinary; it embraces a wide variety of topics from different areas of study. All students will sit for the College Board AP Environmental Science exam in May.

Social Studies

American Government (one semester, fall)

Students in this class will examine the democratic foundations, structures, and institutions of American government at local, state, and national levels. Students will study the political processes to gain understanding of the role of the individuals in the decision-making process of American government. Students will also learn about the rights and responsibilities of the citizens of the United States. Students will investigate American government through a variety of methods, including examining primary source documents, conducting research projects, class discussion, and written essays.

Geography (one semester, fall)

This course is designed to provide the student with a basic introduction to physical and human geography. Students will examine the role which geography plays in the world and how the interactions of humans with the environment affect the other. Students will acquire an understanding of the spatial context of people, places, and environments on Earth. Students will explore the major world regions and examine the physical systems and human interactions within the regions. Students will use maps, globes, in-depth case studies, and geographic systems and databases to help them answer geographic questions. This course serves as an excellent starting point for students wishing to expand their knowledge of the world.

U.S. History

The intended outcome of this year-long course is to provide students with a basic understanding of the political, economic, and social history of the United States. Key U.S. periods of history will be covered in-depth. During the first semester, the major emphasis will be on the early exploration and colonization of North America, the Revolutionary War, Nation-building, and the Civil War and Reconstruction. The emphasis during the second semester will be on America's evolving political and social history at the turn of the century, through the Roaring Twenties, the Great Depression, World Wars I and II, the Cold War era, and post-war modern America. Students will use primary source documents such as speeches and personal narratives to help explain history in a more personal and honest manner. Students will investigate history through a variety of methods, including lecture and discussions, textbook and supplemental readings, map activities, research projects, and essay writing. Students will be encouraged to participate in class discussions, while working to improve their speaking, writing, and critical thinking skills.

Economics (one semester, spring)

Students will be introduced to the study of economics and to basic economic theory and concepts and key elements of micro-and macro-economics. Students will examine the role of government and financial institutions in the U.S. economy, such as the U.S. Federal Reserve and the Stock Market, as well as how the government raises and spends revenue. Students will also learn about international economics, including different systems and international trade. Quizzes, tests, projects, activities, and discussions will be used throughout the semester in the assessment of student learning.

AP European History (per skill level)

Advanced Placement European History course is a college-level survey course that introduces students to the rich political, cultural, social and intellectual heritage of Europe. The study of European history since 1450 introduces students to cultural, economic, political and social developments that played a fundamental role in shaping the world in which we live. In addition to providing a basic narrative of events and movements, the goals of AP European History are to develop (a) an understanding of some of the



principal themes in modern European history, (b) an ability to analyze historical evidence and historical interpretation, and (c) an ability to express historical understanding in writing. All students enrolled in this course will sit for the College Board AP exam in May.

Foreign Languages & The Arts

French I

This course is intended for students with little or no knowledge of French. Through oral and written practice, students will learn to read, write, pronounce and comprehend basic French while also exploring certain aspects of French everyday life. French grammar and syntax will be looked at extensively. Special emphasis is put on communication, encouraging students to speak French with the teacher and their classmates, using English as little as possible. Students will learn everyday phrases and work toward accuracy in pronunciation. Cultural emphasis will be placed on learning about the products and customs of France and getting to know their surroundings. Articles, texts, movies, songs, comics and other media will be used in class. Students will be expected to create a PowerPoint presentation at the end of the year. Grades will be based on regular quizzes and a cumulative final exam.

French II

Through a continued study of the French language, students will continue to improve and enhance their oral and written French. Basic concepts studied in level 1 will be reviewed and looked at in depth. French vocabulary and grammar will be expanded and students will have the opportunity to improve their French through various speaking activities and writings. Articles, texts, movies, songs, comics and other media will be used in class. While French I places an emphasis on communication this course will place emphasis on both communication and more advanced writing skills. Students will continue to learn about various aspects of French culture and francophone countries. This course is intended for students who have had one year of French.

French III

In this course, students will practice extensively their French listening, reading, speaking and writing skills at a much higher proficiency. Students will have regular opportunities to listen to French native speakers through authentic dialogue, French news, and songs. Students will also be exposed to selected reading materials including poems, short stories, articles, newspaper and various other literary selections from France and the Francophone world. These will be used as a basis for grammar review, discussion, mini-presentations, group activities, research and written reflection. Students will be expected to write and express their opinions on a variety of subjects. Students are especially encouraged to read and communicate outside of class. Students should expect to be challenged both in and outside the classroom. French will be used exclusively by the instructor and by the students in the classroom.

AP French

The AP French Language and Culture course emphasizes communication (understanding and being understood by others) by applying interpersonal, interpretive, and presentational skills in real-life situations. This includes vocabulary usage, language control, communication strategies, and cultural awareness. The AP French Language and Culture course engages students in an exploration of culture in both contemporary and historical contexts. The course develops students' awareness and appreciation of cultural products (e.g., tools, books, music, laws, conventions, institutions); practices (patterns of social interactions within a culture); and perspectives (values, attitudes, and assumptions). This course is taught exclusively in French and all students will sit for the College Board AP exam in May.



Electives & The Arts

Studio Art

This course focuses on the production/creation of art and begins with student project proposals. After proposals have been submitted, students are invited to share the different means by which the projects can be completed. The project goals are set accordingly. The course focuses on developing a variety of skills involved with the artistic, technical, and methodical. This course is taught primarily in French.

Music

In this course students discover the language of music. They are expected to define the musical works typical of different eras. The connection between these musical works and other art expressions (i.e. literature, theatre, painting) is emphasized. Students sing and play instruments with reference to what is being studied, or according to special events throughout the school year. Students who play instruments are given the opportunity to play together (according to their respective levels), with a chorale, or on their own. This course is taught primarily in French.

Philosophy (one semester, spring)

This class offers students the space and time to engage in focused thought about fundamental issues, and learn to better express themselves with clarity and organization. We will learn how to follow nuanced arguments developed in depth, how to read for understanding, how to take notes and prepare writing essays, how to write essays, and how to develop a thoughtful and well-structured argumentation. This work will be done through readings at home, guided readings, in class discussions, group discussions, and essay writing.

World Religions (one semester, spring)

The World Religions course at NDIHS is designed to examine the growth, evolution, and influence of the major faith systems of the world. It is not a course that advocates for any one belief over another. The course will explore the similarities and differences present between various faiths (Judaism, Christianity, Islam, Buddhism, Hinduism) in a comparative fashion. This approach helps understand the various beliefs espoused by people around the world without placing them into competition with one another.

Physical Education

General Physical Education (Semester)

General Conditioning: Students work to improve the five components of physical fitness: muscular endurance, muscular strength, cardio respiratory endurance, flexibility, and body composition via running, calisthenics, abdominal routines, and plyometrics. This course may also include the following individual & team sports: volleyball, basketball, ping pong, and soccer. Students learn the rules and techniques of each sport and practice their skills in games and tournaments.

Health (semester, spring)

This is a one semester course designed to meet guidelines on health topics relevant to citizens of all ages. The course is divided into five broad topic areas: nutrition and lifestyle; mental health; addictions; inherited and chronic conditions; age-related health issues from infancy to senility. Actual, demonstrable improvement in health parameters is encouraged and monitored.



Academic Advisement

College Preparation (one semester, fall, 12th grade)

College Preparation is a one semester course designed to **assist** students with the college application process. Seniors who are planning to attend universities in the US are strongly encouraged to take this class during the fall semester. Students will learn to research colleges, write a college resume, request counselor forms, transcripts, teacher recommendations and much more. This course will include instructions on registering for the SAT and TOEFL and ways to prepare for these exams.

College Preparation (one semester, spring, 11th grade)

College Preparation is a one semester course designed to **assist** students with the college selection and application process. 11th graders who are planning to attend universities in the US are strongly encouraged to take this class during the spring semester and will continue in the class in the fall of 12th grade. Students will learn to research colleges, write a college resume, request counselor forms, transcripts, teacher recommendations and much more. This course will include instructions on registering for the SAT and TOEFL and ways to prepare for these exams.