

High School

Course Catalog

Version 1.8 - April 2023



Dear High School Parents:

The purpose of this course catalog is to assist Nakornpayap International School students, with the guidance of parents, in making subject choices for High School. Included in this guide is a brief description of the courses available per grade, an outline of the placement criteria and prerequisites for each course, and graduation requirements.

At NIS, students must successfully complete specific courses to be eligible to graduate; all graduation requirements must be met. It is a government requirement that all Native Thai students take Thai Language & Culture courses for each year of High School. College-level Advanced Placement (AP) courses are also offered in a number of different subject areas. Students are encouraged to take advantage of these challenging academic opportunities.

At NIS we aim to promote passionate, life-long learners who strive for academic excellence through a well-balanced and relevant curriculum. Our High School program will see doors open to universities worldwide. A NIS High School Diploma is a credential which will allow your child to pursue their dreams at colleges and universities anywhere they wish. NIS opens a world of possibilities by providing the rigorous education, inclusive cultural experiences, and global competencies required to **learn and lead, today and in the future.**

Please study this catalog carefully. All students will complete their subject choices in consultation with an appointed Academic Advisor prior to the end of the academic year. If you have any questions, please do not hesitate to contact one of the contacts below for more information.

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COURSE PLACEMENT CRITERIA


In order to ensure success, there are specific criteria to place students in classes. These can include:

 **Placement Tests** - Teachers can provide a subject-based placement test to evaluate the academic suitability of student level of competence for that class.

 **Standardized test scores** ('Measure of Academic Performance' – MAP)
- Students take the MAP test in Reading, Language Usage, and Mathematics in the fall and summer of each academic year. They are required to meet minimum pre-requisite scores in order to be considered for academic placement in higher level courses.

 **Teacher recommendations** - Teacher recommendations can also be considered when applying for a place in higher level courses of study.

 **Course prerequisites** - Higher level courses can require certain course prerequisites to be eligible for study.

 **Student grades** - Some higher level courses require minimum grades in previous courses in order to be considered for a place.

Schedule Change Requests

Schedule change requests must be made within **the first two weeks** of the academic year. Please see the *Student Parent Handbook* for full details of our *Schedule Change Policy*.

GRADUATION REQUIREMENTS

The NIS High School Program (Grades 9–12) is College Preparatory in nature, offering a variety of Advanced Placement (AP) courses. The graduation requirements and the elective courses offered ensure eligibility for universities and colleges around the world. Most courses have equal graduation credit (1 credit per semester). Students will not receive credit for the courses they fail.

Graduation Requirements	
Subject(s):	Credits:
English Language Arts	8
Mathematics	6
Social Science	6
Science	4
Global Languages*	4
Computer Science	1
Music or Art	1
College Prep	1
Physical Education	1
Other Elective Requirements	24

Total Credits Required for Graduation: 56

*Native Thai students must be enrolled in Thai Language and Culture courses while attending NIS.

Community Service:

Community Service is a graduation requirement at NIS and will be recorded on the graduation transcript. Between grades 9-12, students are required to complete 60 hours of Community Service. These hours can be obtained via in-school opportunities, such as Summer School volunteering, peer tutoring, coaching, and Student Council volunteering, or arranged with organizations outside of school.

Grade Point Average (GPA):

The High School uses the traditional 4.00 scale grading system. Credits are awarded for each course of study at the end of each semester. All numeric percentage grades are converted to a letter grade. Letter grades are then converted to grade points. Upon graduation, the Grade Point Average (GPA) will be recorded on the Official Student Transcript for each semester of study. A student's final High School Cumulative Grade Point Average is then also presented as an average of all semester GPAs.

GPA is calculated based on the following Course Grade Weighting tables:

Regular Course Grade Weighting			
Percentage Grade	Grade	Grade Point	Standards Description
95%-100%	A+	4.00	Far Exceeding
90%-94%	A	4.00	Exceeding
85%-89%	B+	3.00	Above
80-84%	B	3.00	Meeting
75-79%	C+	2.00	Approaching
70-74%	C	2.00	Developing
60-69%	D	1.00	Below
59% and below	F	0.00	Failing

Advanced Placement (AP) Course Grade Weighting			
Percentage Grade	Grade	Grade Point	Standards Description
95%-100%	A+	5.00	Far Exceeding
90%-94%	A	5.00	Exceeding
85%-89%	B+	4.00	Above
80-84%	B	4.00	Meeting
75-79%	C+	3.00	Approaching
70-74%	C	3.00	Developing
60-69%	D	1.00	Below
59% and below	F	0.00	Failing

Other Codes:

P: Passing (no credit)

I: Incomplete

WF: Withdraw Fail (no credit adjustment)

Computation of Grade Point Average (GPA)

A student's grade point average is determined by the following formula:

<i>Sum of GPA points X Credits Earned/ divided by the sum of Registered Credits.</i>

High School Course Selection Policy

- Consider graduation requirements and college acceptance requirements when planning your graduation pathway.
- Always refer to your college and career goals when making your decisions.
- Your elective choices are subject to teacher recommendations, prior grades, test scores, and any necessary entrance examinations.
- Course availability is subject to student enrolment number; courses with an insufficient number of students will not be offered.
- Schedule change requests must be made within **the first two weeks of the academic year**. Applications made after this deadline will result in a *Withdraw Fail* being placed on a student's High School Transcript.
- Advanced Placement Courses are **yearlong** classes; students registered **must** remain in the class for the duration of the academic year. Taking the AP exam for registered AP courses is **mandatory**.
- All courses of study are for the duration of an academic year unless a change is recommended by a teacher, or a student has passed a previously failed graduation requirement.

***** Students must select either English Language Arts or AP English Language & Composition in both grades 11 and 12. *****

HIGH SCHOOL

COURSE DESCRIPTIONS

The following pages contain the descriptions and prerequisites for all of the High School courses. They are organized by subject area.

Subject Areas:

English Language Arts	page 8
Mathematics	page 13
Sciences	page 18
Social Sciences	page 21
Fine Arts	page 28
Thai Language	page 30
World Languages	page 32
Physical Education	page 37
Computer Sciences	page 39

English Language Arts

Pathways	G9	G10	G11	G12
College Prep	ELA 9 (CP)	ELA 10 (CP)	ELA 11	ELA 12
Honors	ELA 9 (H)	ELA 10 (H)	AP English Language & Composition	

ELA 9 College Prep (CP)

Grade Level: 9

Prerequisite: 8th grade English with recommended grade of "B/C" both semesters

MAP Score (Reading): 210 – 220

Writing Focus: Narratives (Reflective and Essays)

This rigorous course teaches NIS students to improve their vocabulary, reading, writing, listening, speaking, and research skills. This course challenges NIS students to engage in cooperative learning activities which challenge them to solve real-life problems and to develop their own critical thinking and problem-solving skills that will help them become independent thinkers and learners. Our students are exposed to a variety of literary genres such as poetry, short stories, novels, and plays; as well as newspaper and magazine articles and other non-fictional texts. NIS students also learn to use the writing process as they write and revise their own paragraphs and craft at least two multi-paragraph essays per semester. They will also learn how to write and craft their own personal narratives. Reading and writing homework is assigned each week, and individual presentations and cooperative learning group projects are required each semester. All 9th Grade College Preparation classes are aligned to the United States Common Core Standards and Benchmarks.

ELA 9 Honors (H)

<i>Grade Level:</i>	9
<i>Prerequisite:</i>	8 th grade English with a grade of "A" both semesters
<i>MAP Score (Reading):</i>	220+
<i>Writing focus:</i>	Narrative (Reflective and Essays)

This rigorous course helps NIS students refine their higher level critical thinking skills. This course challenges NIS Honors students to engage in cooperative learning activities which challenge them to solve real-life problems and to develop their own critical thinking and problem-solving skills that will help them become independent thinkers and life-long learners. Our students are exposed to a variety of higher level literary genres such as poetry, short stories, novels, and plays; as well newspaper and magazine articles and other non-fictional texts. They will also learn how to write and craft their own personal narratives and even craft group and individual short stories. Outside reading is required each week. Students learn to use the writing process as they write four essays per semester. Reading and writing homework is assigned on a daily basis, and individual presentations and group cooperative learning projects are required each semester. All 9th Grade Honors classes are aligned to the United States Common Core Standards and Benchmarks.

ELA 10 College Prep (CP)

<i>Grade Level:</i>	10
<i>Prerequisite:</i>	Recommended 9 th grade English with a grade of "B/C" both semesters
<i>MAP Score (Reading):</i>	215 – 225
<i>Writing focus:</i>	Informational

This rigorous course helps students master their critical thinking skills as they study literature from diverse cultures and time periods. This course challenges NIS students to engage in individual and cooperative learning activities which challenge them to solve real-life problems and to develop their own critical thinking and problem-solving skills. These thought-provoking texts and learning strategies help NIS students to become independent thinkers and learners as they creatively challenge the texts they read. This course utilizes the multi-ethnicity of NIS classrooms as a stimulus for lessons that provide opportunities for multicultural sharing and understanding. This allows our students to view ideas in a multi-cultural context that will help them develop an expanded global view and become more aware and productive global citizens. Students use the writing process to write three to four multi-paragraph essays per semester. Outside reading is required each semester. All lessons and activities are aligned to the United States Common Core 10th Grade Standards and Benchmarks.

ELA 10 Honors (H)

<i>Grade Level:</i>	10
<i>Prerequisite:</i>	<i>Recommended LA Honors (Grade 9) with grade of A or B</i>
<i>MAP Score (Reading):</i>	225+
<i>Writing focus:</i>	<i>Informational/explanatory/process</i>

This rigorous course helps students master their critical thinking skills as they study literature from diverse cultures and time periods. This course challenges NIS students to engage in individual and cooperative learning activities which challenge them to solve real-life problems and to develop their own critical thinking and problem-solving skills. These thought-provoking texts and learning strategies help NIS Honors class students to become independent thinkers and learners as they creative challenge the texts they read. This course utilizes the multi-ethnic nature of NIS classrooms as a stimulus for lessons that provide opportunities for multicultural sharing and understanding. This allows our students to view ideas in a multi-cultural context that will help them develop an expanded global view and become more award and productive global citizens. Students use the writing process to write three to four multi-paragraph essays per semester. Book clubs require extensive outside reading, and group projects are assigned each quarter. Reading and writing homework is assigned on a daily basis. Outside reading is required each semester. The ultimate goal of these classes is to assist students to adequately progress toward ELA AP classes and future academic success. All lessons and activities are aligned to the United States Common Core 10th Grade Standards and Benchmarks.

ELA 11 College Prep (CP)

<i>Grade Level:</i>	11
<i>Prerequisite:</i>	<i>10th grade English required, recommended score of "C" or better</i>
<i>MAP Score (Reading):</i>	220 – 230
<i>Writing Focus:</i>	<i>Argumentative</i>

By the end of grade 11, students will read and comprehend literature, including stories, dramas, and poems, in the grades 11-CCR text complexity band proficiently, with scaffolding as needed at the high end of the range. This includes demonstrating knowledge of eighteenth-, nineteenth- and early-twentieth-century foundational works of American literature.¹ Complexity for this course can be measured by the following texts: "Because I Could Not Stop for Death" by Emily Dickinson (1890), *The Great Gatsby* by F. Scott Fitzgerald (1925), *Common Sense* by Thomas Paine (1776), *Walden* by Henry David Thoreau (1854), and "Politics and the English Language" by George Orwell. Students are expected to read outside of

¹ Aligned to Common Core CCR Standards for Reading, including complexity bands for fiction and non-fiction selections. <http://www.corestandards.org/ELA-Literacy>

class to complete novels and short stories outlined in the individual instructor's syllabus, which will be revised from time to time. In addition to reading seminal works of American literature, students will write for a variety of purposes, with a focus on argumentative writing in their Junior year.

ELA 11 Honors

Grade Level: 11
Prerequisite: 10th grade English required, recommended score of "A"
MAP Score (Reading): 230+
Writing Focus: Argumentative

By the end of grade 11, students will read and comprehend literature, including stories, dramas, and poems, in the grades 11-CCR text complexity band proficiently, with scaffolding as needed at the high end of the range. This includes demonstrating knowledge of eighteenth-, nineteenth- and early-twentieth-century foundational works of American literature.² Complexity for this course can be measured by the following texts: "Because I Could Not Stop for Death" by Emily Dickinson (1890), *The Great Gatsby* by F. Scott Fitzgerald (1925), *Common Sense* by Thomas Paine (1776), *Walden* by Henry David Thoreau (1854), and "Politics and the English Language" by George Orwell. Students are expected to read outside of class to complete novels and short stories outlined in the individual instructor's syllabus, which will be revised from time to time. In addition to reading seminal works of American literature, students will write for a variety of purposes, with a focus on argumentative writing in their Junior year.

ELA 12 College Prep (CP)

Grade Level: 12
Prerequisite: 11th grade English required, recommended score of "C" or better
MAP Score (Reading): 230+
Writing focus: Synthesis/Rhetorical Analysis

By the end of grade 12, students will read and comprehend literature, including stories, dramas, and poems, at the high end of the grade 12 CCR text complexity band independently and proficiently. This includes analysing interpretations of a story, drama, or poem (e.g., recorded or live production of a play or recorded novel or poetry), and evaluating how each version interprets the source text.³ Complexity for this course can be measured by the following texts: Heaney's translation of

² Aligned to Common Core CCR Standards for Reading, including complexity bands for fiction and non-fiction selections. <http://www.corestandards.org/ELA-Literacy>

³ Aligned to Common Core College and Career Readiness Standards. <http://www.corestandards.org/ELA-Literacy/RL/11-12/>

“Beowulf”(1000), “Dulce et Decorum Est” by Wilfred Owen (1920), *The Canterbury Tale* by Geoffrey Chaucer(1387), “Macbeth” by William Shakespeare (1606), and *Gulliver’s Travels* by Jonathan Swift (1726). Students are expected to read outside of class to complete novels and short stories outlined in the individual instructor’s syllabus, which will be revised from time to time. In addition to reading foundation works of British and world literature, students will write for a variety of purposes, with a focus on synthesis of information in their Senior year.

□ Elective Courses

Advanced Placement (AP) English Language & Composition

Grade Level: 11/12
Prerequisite: 10/11th grade English with a grade of “A” both semesters
MAP Score (Reading): 230+
Writing focus: Preparation for the AP writing exam

This rigorous course is designed to parallel a first year college composition and critical thinking class. With a score of three or above on the AP exam, it is possible to waive the undergraduate university English/ Composition course and/or receive units. The purpose of this course is to help students focus on “rhetorical analysis of nonfiction texts and the development and revision of well-reasoned, evidence-centred analytic and argumentative writing.” (College Board, AP English Course Description, 2014, p. 7). The course is organized according to the requirements and guidelines of the current AP English Course Description, and, therefore, students are expected to read critically, think analytically, and communicate clearly both in writing and speech. There is abundant reading and writing requirements that must be met outside of classroom hours. Be prepared for a college-level classroom experience and work load. Syllabus available upon request.

Creative Writing

Grade Level: 10-12
Prerequisite: 75% C or better in ELA 9
MAP Score (Reading): 230+

Course Description: This course is designed to help students develop their creative writing skills in two of the most popular genres: fiction and poetry. Students will learn to write short stories and poems, how to develop characters, how to create vivid settings, and how to use language effectively. The course will also cover the basics of literary analysis, including how to read like a writer and how to critique other people’s work. We will also have a variety of activities to promote critical thinking skills and creativity.

Mathematics

Pathway	Normal Path		Intermediate Path		Advanced Path	
Grade 12	Pre-Calculus (Optional)	AP-Statistics (Optional)	AP Calculus AB/BC	AP-Statistics	Statistics (Optional)	AP-Statistics
Grade 11	Algebra 2	Statistics	Pre-Calculus	Statistics	AP Calculus AB/BC	Statistics
Grade 10	Geometry		Geometry + Algebra 2		Geometry + Pre-Calculus	
Grade 9	Algebra 1		Algebra 1		Algebra 2	
Grade 8	Pre-Algebra		Pre-Algebra		Algebra 1	

Guide for Students

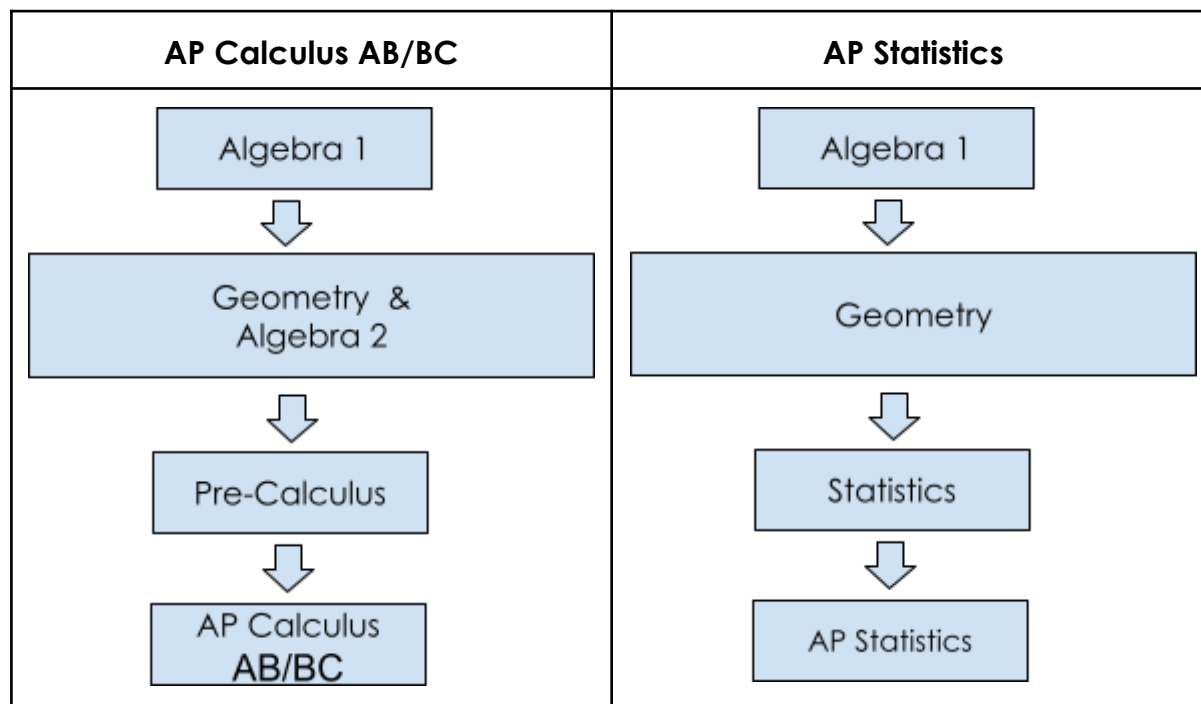
The mathematics department at NIS offers foundational courses in high school algebra and geometry as well as advanced classes in pre-calculus, calculus, and statistics. Two Advanced Placement (AP) classes are offered: AP Calculus AB/BC and AP Statistics.

In order to graduate, high school students must obtain six credits of high-school mathematics: Algebra 1 (two semesters) and Geometry (two semesters), in addition to another mathematics elective (Algebra 2 or Statistics).

Advanced mathematics classes at NIS are differentiated into two fundamental subject areas: Calculus and Statistics after Geometry. Students considering college study in mathematics, engineering, natural science, or economics would benefit most from pursuing the Calculus sequence of Algebra 2 and Pre-Calculus followed by AP Calculus AB/BC. On the other hand, students considering college study in social sciences (psychology, sociology, history, linguistics, etc.) or liberal arts would benefit most from taking Statistics and AP Statistics. This does not suggest that students must choose between these subject areas as many of our students successfully take both sequences simultaneously. Introductory classes in Calculus and Statistics are required credits for many undergraduate degrees and early exposure to these subjects in High School builds an excellent foundation for future study.

AP Course Sequences

Students interested in taking AP Calculus AB/BC or AP Statistics should adhere to the following course sequences:



SAT I - General Test

For the mathematics portion of the SAT, the College Board seeks to assess the extent to which students have fluency with, understanding of, and the ability to apply the mathematical concepts, skills, and practices that are most strongly prerequisite and central to their ability to progress through a range of college courses, career training, and career opportunities.

While most of the mathematics content found on the SAT general test is covered by the end of Algebra 2, in order to achieve a thorough familiarity and skill with the material, students are encouraged to take Pre-Calculus and Statistics.

SAT II - Subject Tests: Mathematics Level 1 and Level 2

Algebra 1, Geometry, and Algebra 2 are considered adequate preparation for taking the SAT Mathematics Level 1 test.

For the SAT Mathematics Level 2 test, students should take at least Pre-Calculus in addition to Geometry, Algebra 1, and Algebra 2

High School Mathematics Course Descriptions

Required Courses

□ Algebra 1

Algebra 1 (Average)

Grade Level: 9
Prerequisite: Pre-Algebra

Through the investigation of meaningful problems individually or in cooperative groups, while using appropriate technology, students will strengthen their foundations of mathematics. Students will prepare for success in future mathematics courses by building content knowledge to meet standards in numbers and operations, algebra, geometry, measurement, data analysis, and probability. The processes of problem-solving, reasoning, communication, connections, and representation are interwoven throughout the content standards.

Algebra 1 (Intermediate)

Grade Level: 9
Prerequisite: Pre-Algebra

Algebra 1 CP is intended to build a foundation for all higher math classes. This course will review algebraic expressions, integers, and mathematical properties that will lead to working with variables and linear equations. There will be an in-depth study of graphing, polynomials, quadratic equations, data analysis, and systems of equations through direct class instruction, group work, homework, student projects, and technology.

Algebra 1 (Advanced) = Algebra 2

Grade Level: 9
Prerequisite: Algebra 1
MAP Score (Mathematics): 230+

The Algebra I advanced course is designed to provide highly motivated students, who have had some previous algebra experience, at an accelerated pace in a cooperative learning environment. The course aims to develop the student's critical thinking and algebraic problem-solving skills and it will enable students to pursue further mathematical courses in the honors stream. In terms of content, the honors course covers the same topics as the college prep stream, at a greater depth in order to better prepare students to follow the higher level mathematics courses.

□ Geometry

Geometry

Grade Level: 10
Prerequisite: Algebra 1

The aim of the Geometry course is to equip the students with the basic concepts of geometry through a hands-on, investigative approach. Throughout the course, the students' spatial reasoning and problem-solving skills applied to geometric principles will be developed. The course content is aligned to the Common Core State Standards for mathematics and the problem solving skill set developed will assist with the student's future education, career, and has many real life applications.

□ Elective Courses

Algebra 2

Grade Level: 10
Prerequisite: Algebra 1
MAP Score: 230+

Algebra 2 builds on the material from Algebra 1 to provide students with a thorough course in High-school algebra including the real and complex numbers, reasoning with expressions and equations, elements of analytic geometry and general abstract and operational thinking. Students are expected to be self-motivated and eager to attempt challenging problems.

Pre-Calculus

Grade Level: 10/11/12
Prerequisite: Algebra 2. At least a "C" in Algebra 2
MAP Score: 240+

Pre-Calculus is the conceptual bridge between algebra and geometry and calculus. The core theme of Pre-Calculus is the concept of a function. Students will learn abstract properties of functions and will gain a detailed understanding of the so-called elementary functions: polynomials, rational functions, exponentials and logarithms, trigonometric and hyperbolic functions. This course is required for both Calculus and AP Calculus.

Statistics

<i>Grade Level:</i>	<i>11 or 12</i>
<i>Prerequisite:</i>	<i>Algebra 1 and Geometry</i>
<i>MAP Score:</i>	<i>240+</i>

Statistics is the science of collecting, analyzing, and drawing conclusions from data. Students will explore patterns in data, understand the principles of sampling and experimentation, use probability and simulation to anticipate patterns, and make statistical inferences. This course is required for AP Statistics.

AP Courses

AP Calculus AB/BC

<i>Grade Level:</i>	<i>11/12</i>
<i>Prerequisite:</i>	<i>Pre-Calculus with at least a 'B' grade.</i>
<i>MAP Score:</i>	<i>250+</i>

AP Calculus AB is designed to help students develop a conceptual understanding of college-level calculus content, as well as proficiency in the skills and practices needed for mathematical reasoning and problem solving. After completing the course, students should be able to apply critical thinking, reasoning, and problem-solving skills in a variety of contexts; use calculus terminology and notations appropriately; and clearly communicate their findings using mathematical evidence and justifications.

AP Statistics

<i>Grade Level:</i>	<i>12</i>
<i>Prerequisite:</i>	<i>Statistics with at least a 'B' grade.</i>
<i>MAP Score:</i>	<i>240+</i>

Statistics is the science of collecting, analysing, and drawing conclusions from data. Students are exposed to four broad conceptual themes:

1. Exploring Data: Describing patterns and departures from patterns
2. Sampling and Experimentation: Planning and conducting a study
3. Anticipating Patterns: Exploring random phenomena using probability and simulation
4. Statistical Inference: Estimating population parameters and testing hypotheses. Students who successfully complete the course and exam may receive credit, advanced placement, or both for a one-semester introductory college statistics course.

Sciences

Pathways	G9	G10	G11	G12
Physics	Physical Science 1	Physics 1	AP Physics 2	
Chemistry	Physical Science	Chemistry	AP Chemistry	
Biology		Biology	Advanced Biology	AP Biology

Physical Science 1

Grade: 9
Prerequisites: None

Physical science is the study of matter and energy. Physical science is a mandatory course and provides students with the foundations of both chemistry and physics. Physical science 1 specifically covers the topics of elements and matter, forces and motion, energy and chemical reactions. The course provides students with the conceptual understanding of theoretical aspects of the above mentioned topics and introduces the notion of scientific inquiry as a method for investigating unknown phenomena in order to acquire new knowledge.

Physics 1 College Prep (CP)

Grade Level: 10/11/12
Prerequisite: Minimum grade of "B" in Geometry

Physics is considered the fundamental science, a study of the laws of nature – energy, matter, and their interrelationships – and dealing with objects from the smallest sub-atomic particles to the very largest in the universe. In this course, a conceptual oriented approach will be utilized for better understanding of general laws of physics, and special emphasis is placed on applications and using practical examples from everyday experience. Relevant mathematics leading to the establishment of these laws is introduced to assist with developing analytical skills of students.

AP Physics 1

Grade Level: 12

Prerequisite: *Physics with a minimum grade of "B"*

AP Physics 1 is an algebra-based college level physics course. A challenging course, it meets the requirements of the College Board AP Physics 1 curriculum. The course content covers a first year college level physics class and successful students can receive a semester of college credit. Lab experiments designed to facilitate student understanding of concepts and principles are important component of the course (25% in terms of class time and final grade). Students will be required to develop their own lab experiments to test a hypothesis, measure certain properties, or prove a principle. Lab skills are directly tested on the AP Physics 1 exam and the lab experiments will provide valuable experience in real-world scientific investigations.

Chemistry

Grade: 11

Prerequisites: *Physical science 1 (C grade or above)*

Chemistry is the science of change. Before delving into the processes of change, known as chemical reactions, a firm understanding of what makes up matter needs to be covered. Therefore, the majority of advanced chemistry focuses on the atoms' outermost electrons, and how they are arranged, and the likelihood of their rearrangement. This along with a basic knowledge of how matter interacts will provide a solid framework in order to clearly understand the science of change.

AP Chemistry

Grade: 12

Prerequisites: *Chemistry (B grade or above)*

The goal of AP Chemistry is to provide the student a foundation of knowledge on which to rationalize, summarize and predict the structure and properties of materials that make up chemistry. This class is designed to be the equivalent of the general chemistry course usually taken during the first year of college. This course is divided into 5 main topics covering all aspects of the AP Exam, namely the structure of Matter, chemical bonding, the states of matter, physical chemistry and chemical reactions.

Biology

Grade: 10
Pre-requisite: None

This course introduces the principles and concepts of biology. Emphasis is on basic biological chemistry, cell structure and function, metabolism and energy transformation, genetics, evolution, classification, and other related topics. Upon completion, students should be able to demonstrate understanding of life at the molecular and cellular levels. Laboratory exercises reinforce lecture topics and include microscope techniques.

Advanced Biology (Pre-AP Biology)

Grade: 11-12
Pre-requisite: Biology (C grade or above)

This course is a continuation of Biology and the preparation of AP Biology. Emphasis is placed on organisms, biodiversity, plant and animal systems, ecology, and other related topics. Upon completion, students should be able to demonstrate comprehension of life at the organismal and ecological levels. Laboratory exercises include microscope observations and dissections to reinforce topics discussed in lecture.

AP Biology

Grade: 11-12
Pre-requisite: Advanced Biology (B grade or above)

This laboratory-based course focuses on the process of scientific investigation through the study of living things and the world in which we live. AP biology is a college level introductory biology course usually taken by biology majors during their first year. Students who pass the class and AP exam with satisfactory marks, are permitted to take upper level biology classes or classes for which advanced biology is a prerequisite.

Social Sciences

Modern History College Prep (CP)

Grade Level: 9

Prerequisite: Recommended: 8th Grade History with a grade of B or C for both semesters

MAP Score (Reading): 210 – 220

This course will cover historical events, figures, themes, and movements between from the 15th century to the late 19th century. Lessons are designed to help students refine their higher level critical thinking skills as they study historical sources. Students will be required to do outside research and present their findings for the class. Students will develop skills to articulate central ideas or information from primary and secondary sources. Reading and writing homework is assigned on a daily basis, and individual presentations and group projects are required each semester.

Modern History Honors (H)

Grade Level: 9

Prerequisite: Recommended: 8th Grade History with a grade of A or B for both semesters

MAP Score (Reading): 220+

This course will cover historical events, figures, themes, and movements between from the 15th century to the late 19th century. Lessons are designed to help students refine their higher level critical thinking skills as they study historical sources. Students will be required to do outside research and present their findings for the class. Students will develop skills articulate central ideas or information from primary and secondary sources. Reading and writing homework is assigned on a daily basis, and individual presentations and group projects are required each semester.

Contemporary History College Prep (CP)

Grade Level: 10

Prerequisite: Recommended: 9th Grade History with a grade of B or C both semesters

MAP Score (Reading): 220 – 230

This course will cover historical events, figures, themes, and movements from the 20th and 21st centuries. Lessons are designed to help students refine their higher level critical thinking skills as they study historical sources. Students will be required to do outside research and present their findings for the class. Students will develop skills articulate central ideas or information from primary and secondary sources. Reading

and writing homework is assigned on a daily basis, and individual presentations and group projects are required each semester.

Contemporary History Honors (H)

Grade Level: 10

Prerequisite: *Recommended: 9th Grade History with a grade of A or B both semesters.*

MAP Score (Reading): 230+

This course will cover historical events, figures, themes, and movements from the 20th and 21st centuries. Lessons are designed to help students refine their higher level critical thinking skills as they study historical sources. Students will be required to do outside research and present their findings for the class. Students will develop skills to articulate central ideas or information from primary and secondary sources. Reading and writing homework is assigned on a daily basis, and individual presentations and group projects are required each semester.

Advanced Placement (AP) World History

Grade Level: 11/12

Prerequisites: *Modern and Contemporary History, GPA 3.25+*

MAP Score (Reading): 230+

Advanced Placement World History is designed to be the equivalent of a two semester introductory college or university world history course. In AP World History students investigate significant events, individuals, developments, and processes in four historical periods from approximately 1200 C.E. to the present. Students develop and use the same skills, practices, and methods employed by historians: analysing primary and secondary sources; developing historical arguments; making historical comparisons; and utilizing reasoning about contextualization, causation, and continuity and change over time. This course is designed to prepare students for the AP World History Exam. Students will be required to write, on average, one essay every other week.

Advanced Placement (AP) Comparative Government and Politics

Grade Level: 11/12

Prerequisites: *Modern and Contemporary History GPA 3.25+*

MAP Score (Reading): 230+

The AP Comparative Government and Politics course detailed in this framework reflects what comparative political science teachers, professors, and researchers agree that a college-level comparative government and politics course should teach students to do: define and describe major political concepts, analyze

patterns of political processes and behavior and their consequences, and compare and contrast political institutions and processes across countries. Students will show mastery of these skills on the AP Exam through various means, including applying concepts, analyzing data, comparing countries, and writing political science arguments. Students study six countries in AP Comparative Government and Politics: China, Iran, Mexico, Nigeria, Russia, and the United Kingdom.

Business & Economics (Social Sciences)

Introduction to Business / Accounting

Grade Level: 11 & 12
Prerequisite: None
Requirements: Personal Laptop

The goals of this business class are to introduce the principles essential for understanding today's global and fast-paced business environment and to provide students with an overview of accounting. The first half of the course will focus on business trends, ownership structures, briefly on marketing and the steps in creating a business. The second half of the course will focus on accounting for a small business. Students will develop skills in creating and using spreadsheets for accounting.

Marketing / Entrepreneurship

Grade Level: 11
Prerequisite: None
Requirements: Personal Laptop

Marketing and Entrepreneurship are two courses melded together to create a comprehensive introduction to creating an innovative and successful business. The principles of marketing, and the process of innovation to provide value to customers have created some of the most successful companies in the world. We will learn from them and develop an understanding to see the business world with a fresh perspective.

This course is university level modified for high school. The content is up to date and reflects the latest trends in marketing and innovation. It is a challenging course, however all students will succeed by using class time efficiently and participating fully.

Economics

<i>Grade Level:</i>	<i>11</i>
<i>Prerequisite:</i>	<i>None</i>
<i>Requirements:</i>	<i>Personal Laptop</i>

The goals of the economics class are to introduce the principles essential for understanding today's global economy. It is a survey course of the various sectors of economics and the tools for analysis. We will also examine the effect of Covid-19 and the war on Ukraine on the world economy.

This course is a survey of the content of an economics degree and is useful to help students decide on future paths. The course is good for all students to have the essentials in understanding our world and be equipped for decision making.

Advanced Placement Macroeconomics

<i>Grade Level:</i>	<i>12</i>
<i>Prerequisite:</i>	<i>Algebra 1 & 2, GPA of at least 3.3</i>
<i>Requirements:</i>	<i>Personal Laptop</i>

AP Macroeconomics is a challenging first year university course that examines the economic system as a whole for countries and the global economy. Students use principles and models to describe economic situations and predict and explain outcomes with graphs, charts, and data. Concepts explored include economic measurements, markets, macroeconomic models and macroeconomic policies. All students will sit the AP Macroeconomics exam.

Advanced Placement Microeconomics

<i>Grade Level:</i>	<i>12</i>
<i>Prerequisite:</i>	<i>Algebra 1 & 2, GPA of at least 3.3</i>
<i>Requirements:</i>	<i>Personal Laptop</i>

AP Microeconomics is a challenging first year university course. The focus is on how markets work, how prices are determined and government intervention into the market. Students use principles and models to describe economic situations and predict and explain outcomes with graphs, charts, and data as they explore concepts like scarcity and markets; costs, benefits, and marginal analysis; production choices and behavior; and market inefficiency and public policy. All students will sit the AP Microeconomics exam.

Psychology (Social Sciences)

Psychology Honors (H)

<i>Grade level:</i>	<i>10/11/12</i>
<i>Prerequisites:</i>	<i>MAP Score (Reading) 230+</i>
<i>Course Length:</i>	<i>Yearlong course</i>

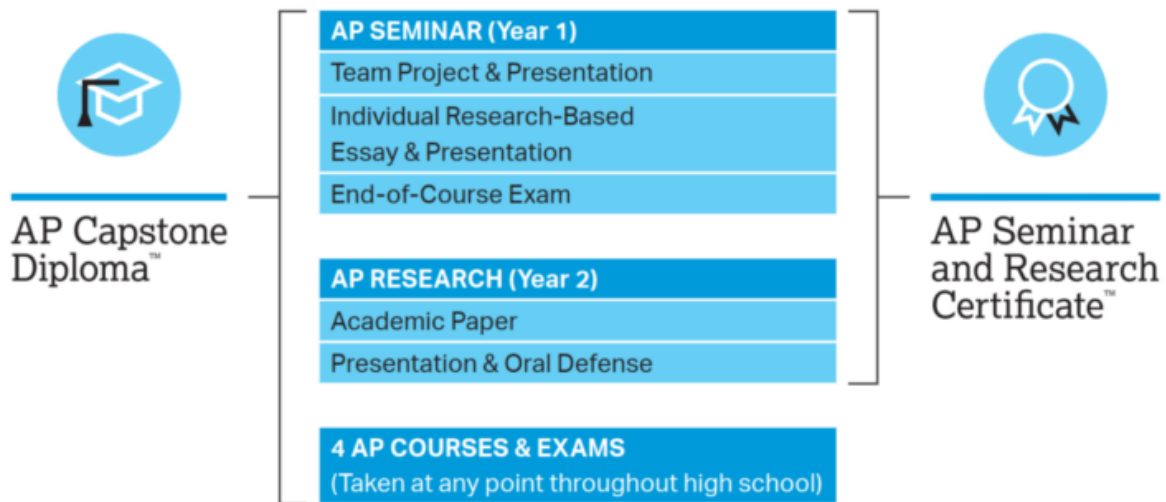
This course will provide students with an introductory level of understanding regarding the following topics: brief history of psychology, research methods, life span development, biological aspects (such as brain, nervous system, sense and perception), different schools of psychology (psychoanalytic, behavioristic, humanistic), memory, personality, and psychological disorders. This course will explore the terminology and concepts of this discipline and provide a better understanding of self and others. This course will use a combination of lectures, group work, video clips, and games in order to get a better understanding of what psychology is. Through textbook readings, projects, and directed activities that emphasize critical thinking and applications, students explore psychology as the science of behavior and of mental processes.

Advanced Placement (AP) Psychology

<i>Grade level:</i>	<i>11/12</i>
<i>Prerequisites:</i>	<i>Completion and qualification of grades 85% B or better of high school Psychology/Honors Psychology/ MAP Score (Reading) 230+</i>
<i>Course Length:</i>	<i>Yearlong course</i>

This year-long Advanced Placement Psychology course will prepare students to take the AP Psychology exam in May. This is a college level exam in which 100 multiple-choice questions and two Free Response Questions (FRQs) will determine the students' content knowledge of Psychology. The course content will "introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They also learn about the ethics and methods psychologists use in their science and practice." Through textbook readings, projects, and directed activities that emphasize critical thinking and applications, students explore psychology as the science of behavior and of mental processes. This course has been reviewed and approved by the College Board to use the "AP" designation.

AP Capstone Diploma (Social Sciences)



The **AP Capstone Diploma** program is composed of:

1. **AP Seminar:** AP Seminar provides sustained practice of investigating issues from multiple perspectives and cultivates student writing abilities so they can craft, communicate, and defend evidence-based arguments. Students are empowered to collect and analyze information with accuracy and precision and are assessed through a team project and presentation, an individual written essay and presentation, and a written exam.
2. **AP Research:** In AP Research, students develop the skills and discipline necessary to conduct independent research to produce and defend a scholarly academic thesis. This second course in the AP Capstone experience allows students to explore deeply an academic topic, problem, or issue of individual interest and through this inquiry, students design, plan, and conduct a year-long mentored, research-based investigation. The course culminates in an academic thesis paper of approximately 5,000 words and a presentation, performance, or exhibition with an oral defence.
3. Four or more AP courses and exams of the student's own choosing.

AP Seminar

Grade Level: 11/12
Prerequisite: Passing grades in all ELA courses.
MAP Score (Reading): 220+

Students investigate real-world issues from multiple perspectives, gathering and analyzing information from various sources in order to develop credible and valid evidence-based arguments. AP Seminar is a yearlong course. Students are assessed with two through-course performance tasks and one end-of-course exam. All three assessments are summative and used to calculate a final AP score (using the 1-5 scale) for AP Seminar. These performance tasks include a written research reports, a team presentation, and an individual presentation.

AP Research

Grade Level: 12
Prerequisite: AP Seminar
MAP Score (Reading): 220+

Students cultivate the skills and discipline necessary to conduct independent research in order to produce and defend a scholarly academic thesis. AP Research is a year-long course. Students are assessed with one through-course performance task consisting of two distinct components. Both components will be included in the calculation of a final AP score (using the 1-5 scale). There is no end-of-course exam for AP Research.

Fine Arts

□ Music

Grade 9 Band

Prerequisite: Director Approval

Instrumental band is designed for musicians at various levels of ability who desire to perform appropriate band literature. Emphasis is placed on interpretations of style, phrasing, articulation, and dynamics with concentration on technique and music theory. Performances are required. Students may be required to rent a musical instrument from the school or purchase their own.

Senior Band

Grade Level: 10 -12

Prerequisite: Director Approval

This course is open to those students who already possess a higher level of skill. Focus is on improving technical proficiency and sight-reading skills. Additionally, students are expected to have a high level of interpretative skills in style, phrasing, articulation, and dynamics. Regular performance assessments take place over the span of the semester. Finally, students will also study units in music history, music appreciation and composition.

□ Art

Grade 9 Art

Prerequisite: Completion of Grade 8 Art

This course is open to teach students composition through the elements (line, color, shape/form, texture, and value) and principles of design. (Balance/emphasis/contrast, repetition, proportion/scale). To explain new concepts and the uses of tools and materials. Techniques and processes used in sculpture: clay, papier-mâché, collage, fibers, found objects etc. To improve basic artistic skills: Observational drawing techniques (figure, portrait, still-life, landscape, perspective etc.) Painting techniques (watercolor, acrylic, pastel etc.) To build self-confidence by showing students they are unique and that their ideas have merit. To introduce students to art history and appreciation. To offer open-ended projects that personal interpretations.

High School Art

Grade Level: 10-12

Prerequisite: *Completion of Grade 9 Art*

This course is a continuation of grade 9 ART in regards to drawing and painting; allowing students the fullest opportunity to explore the range of possibilities in art. This course stresses the development of craftsmanship and strategies for personal exploration. Principles of color, form and pictorial space and their relationship to materials and techniques will be basic to all class projects.

AP Art & Design in Drawing or 2D Design

Grade Level: 11-12

Prerequisite: *Completion of High School Art with a grade of "B" or above*

Sustained Investigation: 15 digital images and responses to prompts.

-Works demonstrate sustained investigation through practice, experimentation, and revision. (60% of total score)

-Selected Artworks: 5 physical works each demonstrate synthesis of materials, processes, and ideas. (40 % of total score)

-AP Art & Design Exams in May

Thai Language

Thai 1

Grade Level: 9-12
Prerequisite: None

This is the first course for the students who have never learned Thai, students will acquire four skills, particularly listening and speaking. They will learn vocabulary, simple sentence structures in Thai, easy ways of asking and answering questions, pronunciation, and conversation. Additionally, students will learn Thai crafts, cooking, and cultures, such as Loy Krathong and Songkran.

Thai 2

Grade Level: 10-12
Prerequisite: Thai 1

This course is divided into two categories: the first focuses on speaking and listening skills, designed to help students gain more confidence in speaking and listening to Thai. Students will learn to communicate using sentences in a variety of conversations based on real-life situations, as well as vocabulary, grammar, phrases, and Thai idioms. The second category focuses on writing and reading skills. Students will start by learning the Thai writing system which consists of consonants, vowels, tones, sentence writing, and reading practice. Additionally, students will learn about Thai culture, crafts, and cooking.

Thai 3

Grade Level: 11-12
Prerequisite: Thai 1 and 2

This course will acquire skills in speaking, reading, writing, and listening, especially to improve students' writing and reading skills, along with summarizing stories, articles, folk story dialogues, and news. The students will learn about complex grammatical structures and idioms. In addition, students will learn about Thai culture, cooking, and crafts. Moreover, students will have the opportunity to be MCs and create writing scripts for Thai events to improve their writing and speaking skills.

Thai for native Thai students.

Grade Level: 9-12

Prerequisite: for native Thai students

This course is for native Thai students and will follow the guidelines of the Thai Ministry of Education. The course focuses on four skills: speaking, reading, writing, and listening. Each lesson will contain topics like Law ,History, Geography and Social study that relate to grammar. In addition, this course will teach students about Thai culture, Thai law, Thai literature, Thai food, and Thai crafts. It will also give students the opportunity to be MCs and create the script for Thai events to improve their speaking skills.

World Languages

➤ Japanese

Japanese 1

Grade Level: 9 & 10

Prerequisite: None

Systematic study of Japanese using the four basic skills of listening, speaking, reading and writing. This rigorous course helps students improve to a level sufficient for basic everyday life learning with basic verbs and adjectives. They build solid knowledge as they complete worksheet in each lesson, challenging homework, frequent writing assignments, and extensive readings. Creating New Year's cards is also required as an annual project.

Japanese 2

Grade Level: 9-11

Prerequisite: Japanese 1

This rigorous course helps students improve their vocabulary, reading, writing, listening, speaking Japanese with learning basic Kanji to a level sufficient for everyday life using with Te form of verbs, Nai form of verbs and Dictionary form of verbs. They build the solid knowledge as they complete worksheet in each lesson, challenging homework, frequent writing assignments, and extensive readings. Individual project is required each semester including oral presentations where students are trained in the appropriate use of formal expressions.

Japanese 3

Grade Level: 10-12

Prerequisite: Japanese 1 and 2

This rigorous course helps students improve their vocabulary, reading, writing, listening and speaking Japanese including learning Kanji. Enhance the student's capacity to communicate using conversational forms of verbs such as Ta form and Plain style of verbs at advanced level. They build solid knowledge as they complete a worksheet in each lesson, challenging homework, frequent writing assignments, and extensive readings. Individual projects are required each semester including oral presentations where students are trained in the appropriate use of formal expressions in this course.

Tokubetsu course- Japanese 4

Grade Level: 11,12

Prerequisite: Japanese 1, Japanese 2 and Japanese 3

This rigorous course helps students improve not only their vocabulary, reading, writing, listening and speaking Japanese including learning Kanji but also increased speed and comprehension in the reading of various textual types, with a special emphasis on the accurate understanding of structurally complex sentences. This course is at the level that students have completed Lesson 50 of the textbook. This course is suitable for those students who are going to take JLPT learning with 17 forms of verb and honorific language. Students are required to practice repeatedly, review, and to acquire knowledge on a daily basis.

➤ Spanish

Spanish 1

Grade Level: 9 & 10

Prerequisites: None

An introduction to the Spanish language focusing on basic conversation, present tense verb conjugations and useful vocabulary. The course book that is used (VOCES) is grounded in the AP curriculum requirements to lead the students who pursue Spanish in advanced levels to be able to take the exam if they are willing. Each unit corresponds with a country of study allowing students to dig deeper into the history, culture, religion, food and dance of Spanish speaking countries around the world. Lesson are taught mainly in Spanish, encouraging the students to start being aware of the target language. Every activity is designed for the students to grow in their language skills.

Spanish 2

Grade Level: 10 & 11

Prerequisites: Spanish 1 or Equivalent

This course is designed to move beyond introductory Spanish and give students the skills to conjugate verbs in preterit, imperfect and other grammatical structures. The course book that is used (VOCES) is grounded in the AP curriculum requirements to lead the students who pursue Spanish in advanced levels to be able to take the exam if they are willing. Emphasis is given to conversational skills and the use of new verbs in context. Like Spanish 1, each unit in Spanish 2 is accompanied by a Spanish speaking country for further understanding. Lessons are taught 80% in Spanish and students are constantly demanded to use the language as much as possible.

Spanish 3

Grade Level: 10-12

Prerequisites: Spanish 1 or equivalent and Spanish 2

Spanish 3 course leads the students to keep learning in detail more complex grammatical structures, idioms and expressions, study different social and cultural context about Spanish speaking countries and pushes them to communicate in the target language using different skills. The course book that is used (VOCES) is grounded in the AP curriculum requirements to lead the students who pursue Spanish in advanced levels to be able to take the exam if they are willing. Lessons are taught 80% to 100% in Spanish and students are constantly demanded to use the language as much as possible.

Spanish 4

Grade Level: 12

Prerequisites: Spanish 1 or equivalent, Spanish 2, and Spanish 3

Spanish 4 is an advanced course that seeks to give the students the opportunity to learn new linguistic and grammatical content but also to go over complex structures they already learned in the past courses. These review units are within new contexts where the vocabulary, idioms and phrases are rooted in more specific fields to walk the students with something they already know to new areas of learning and discussion. In this course the new grammatical and cultural knowledge will take the students to a new level of comprehension and awareness of the language. The course book that is used (VOCES) is grounded in the AP curriculum requirements to lead the students who pursue Spanish in advanced levels to be able to take the exam if they are willing. Lessons are taught 95% to 100% in Spanish and students are constantly demanded to use the language as much as possible.

➤ Chinese

Chinese 1

Grade Level: 9 & 10

Prerequisites: None

Focusing on the first Chinese course, students are expected to be able to understand basic introduction words, phrase, sentences, songs, stories, and dialogs in the surrounding environments, as well as the differences between Chinese and English. Students will also develop and be exposed to complex words, phrases, and long sentences related to other courses while being able to translate them. Moreover, they can improve their skills: listening, speaking, reading and writing while they are studying in the class. However, this course emphasizes the use of Chinese

for pragmatic communication. Furthermore, to learn Chinese profoundly, it is not only the study of how to read and write Chinese, but students will be introduced to Chinese culture, traditions, and festivals. Thus, this course provides the opportunity to learn Chinese culture, traditions, and festivals by doing some activities, such as, Chinese movie, Chinese chess, and Chinese New Year's Day. Grade is dependent on supporting documentation, quizzes, and class participation.

Chinese 2

Grade Level: 10 & 11

Prerequisites: Chinese 1 or Equivalent

In this course students will be able to focus on listening, speaking, and writing especially for communication in everyday life. Along with communication, students will learn more advanced orders, request, phrases, and gestures. Students will be exposed to Chinese dialogs and short sentences. In addition, students will learn Chinese culture through activities such as Chinese movie, Chinese chess, and Chinese New Year. The most important after the students' graduate course is they can learn Chinese by self-interest of each student. Grade is dependent on supporting documentation, quizzes, and class participation.

Chinese 3

Grade Level: 10-12

Prerequisites: Chinese 1 or equivalent and Chinese 2

The focus of the Chinese course is to build an understanding of complicated words, phrases, sentences, songs, stories, complex orders, dialogues, and sentence patterns in context, as well as an appreciation of the differences between Chinese and English. Students will develop a strong skill that will allow them to use Chinese language correctly in the form of requests and opinion. Students also learn to translate language and content ideas from other subjects into Chinese. The course encompasses all key language skills: listening, speaking, reading, and writing with an overall emphasis on the use of Chinese for pragmatic communication. Grade is dependent on supporting documentation, quizzes, and class participation.

Chinese 4

Grade Level: 12

Prerequisite: Chinese 1, Chinese 2 and Chinese 3

Students who take this course are expected to be able to understand, comprehend, translate, and read complicated orders, requests, gestures, phrases and sentences along with understanding advanced level dialogs from the surrounding

environments, songs, and stories. Communication skills will be enhanced by focusing on creating short sentences, as well as creating a biography by using gestures, pictures, words, and phrases and to allow students to reasonably express their opinion or idea about their daily routines at home and school. Students will be able to recognize Chinese cultures, traditions, and festivals and understand the differences between Chinese and English in terms of accent, words, phrases, and sentence structures. This course will also encourage students to participate in Chinese language and cultural activities held by school. Grade is depended on supporting documentation, quizzes, and class participation.

Physical Education

Guide for Students

The Physical Education Department at NIS offers a foundational Grade 9 course in Health & Physical Fitness, as well as specialised courses in Team Sports, Weight Training, and Sports Leadership

In order to graduate, high school students must obtain one credit from the physical education courses offered. Health & Physical Fitness is available in the 9th grade; all students in grade 9 will take this course to satisfy their graduation requirement. Depending on ability, motivation, and future academic goals, students may then pursue physical education electives during their 10th, 11th, and 12th grade years.

High-school Physical Education Course Descriptions

Health & Physical Fitness

Grade: 9

Prerequisite: N/A

This course serves as a mandatory requirement for all 9th grade students at NIS. Health and Physical Fitness is designed to promote overall health and wellness through a variety of physical activities, classroom lessons and discussions, and health-related assignments. Subjects covered in Health and Physical Fitness include social health, mental health, emotional health, physical health, sexual education, environmental health, spiritual health, drugs/alcohol, growth and development, peer pressure, gender, contraception, STI's, interpersonal and intrapersonal relationships, society and health, cardiovascular exercise, muscular endurance and strength training, and flexibility.

Weight Training & Fitness

Grade: 10-12

Prerequisite: Health & Physical Fitness

This course serves as an introduction to weight training and fitness and a prerequisite for ADV Weight Training & Fitness. Weight Training & Fitness 1 is designed to promote overall health and wellness through a variety of aerobic, anaerobic, balance, flexibility, and strength activities and lessons. Subjects covered in Weight Training & Fitness 1 include cardiovascular exercises, powerlifting, bodybuilding, body weight exercises, interval training, yoga, plyometric, and stability training

Team Sports

Grade: 10-12

Prerequisite: *Health & Physical Fitness*

This course serves as an introduction to team sports and a prerequisite for ADV Team Sports. Team Sports 1 is designed to promote overall health and wellness through a variety of team/group activities, sports, and games. Subjects covered in Team Sports 1 include basketball, football/futsal, American football, baseball/softball, floor hockey, kickball, handball, volleyball, capture the flag, badminton, team building, communication, teamwork, roles and responsibilities, and adaptability.

Sports Leadership

Grade: 11-12

Prerequisite: *Health & Physical Fitness & Participation in Varsity Level Sports*

Sports Leadership is a new course that will be offered next year for Grade 11 and Grade 12. The primary goal of this course is for students to demonstrate their individual and cooperative leadership capabilities, as well as develop skills that will facilitate decision-making for themselves and fellow classmates. Leading through service is the majority of this curriculum. There will also be opportunities to learn the rules of a variety of sports and time for gameplay. Students will have an opportunity to pursue these leadership experiences for all grade levels at NIS and the CMAC community through a variety of tasks that work directly with the athletics department.

Computer Sciences

Computer Science & Digital Literacy College Prep (CP)

Grade Level: 9
Prerequisite: None

Students have the opportunity to use more specialized technology tools that enhance their learning. These include a wide variety of content-specific tools. In addition, students should have the opportunity to learn how to write code in a commonly used programming language. Students should have developed an appreciation for the capabilities and capacities of technology, as well as an understanding of how these tools can be used for lifelong learning. In addition, students should be knowledgeable about the role technology plays in various fields of work, enabling them to better plan for their careers in the 21st century.

Students should be able to use technology as a tool to research, organize, evaluate and communicate information. To use digital technologies, communication/networking tools and social networks appropriately to access, manage, integrate, evaluate and create information to successfully function in a knowledge economy and apply a fundamental understanding of the ethical/legal issues surrounding the access and use of information technologies.

Web Design College Prep (CP)

Grade Level: 10
Prerequisite: *Grade 9 CS&DL Recommended 10th grade English with a grade of "B/C" in both semesters*

In this course, students develop and build web pages using the different web-development tools and frameworks. They will start off by learning about the basic concepts of how the Internet and browsers work and learn the fundamentals of web development. Students then learn the core building blocks of web page design, including HTML and CSS. Students learn how to structure and style pages using HTML and CSS. Students then start to learn a popular programming language called Javascript, to build websites with dynamic content with features that can respond to interactions from viewers. In addition, students also practice valuable programming skills such as debugging, using resources, and teamwork. Finally, they'll find out how to build more complex web projects, from animations to online games. The Web Design & Development curriculum is an introduction to the design, creation, and maintenance of web pages and websites.

Python Programming

Grade Level: 11

Prerequisite: *Recommended 9th-grade Computer Science with a grade of "B/C" in both semesters*

This course aims to teach students the basics of programming computers using Python. Students learn the basics of how one constructs a program from a series of simple instructions in Python. The course introduces students to the programming basics (what it is and how it works), binary computation, problem-solving methods, and algorithm development. Includes procedural and data abstractions, program design, debugging, testing, and documentation. Covers data types, control structures, functions, parameter passing, library functions, arrays, inheritance, and object-oriented design. Laboratory exercises in Python.

Advanced Placement (AP) Computer Science A

Grade Level: 11/12

Prerequisite: *Recommended 9th-grade Computer Science with a grade of "B" in both semesters & to have successfully completed a first-year high school algebra course.*

AP Computer Science A introduces students to computer science through programming. Fundamental topics in this course include the design of solutions to problems, the use of data structures to organise large sets of data, the development and implementation of algorithms to process data and discover new information, the analysis of potential solutions, and the ethical and social implications of computer systems. The course emphasises object-oriented programming and design using Java programming language. This course is an introductory college-level computer science course. Students cultivate their understanding of coding through analysing, writing, and testing code as they explore concepts like modularity, variables, and control structures.