

# HIGH SCHOOL COURSES SELECTION GUIDE

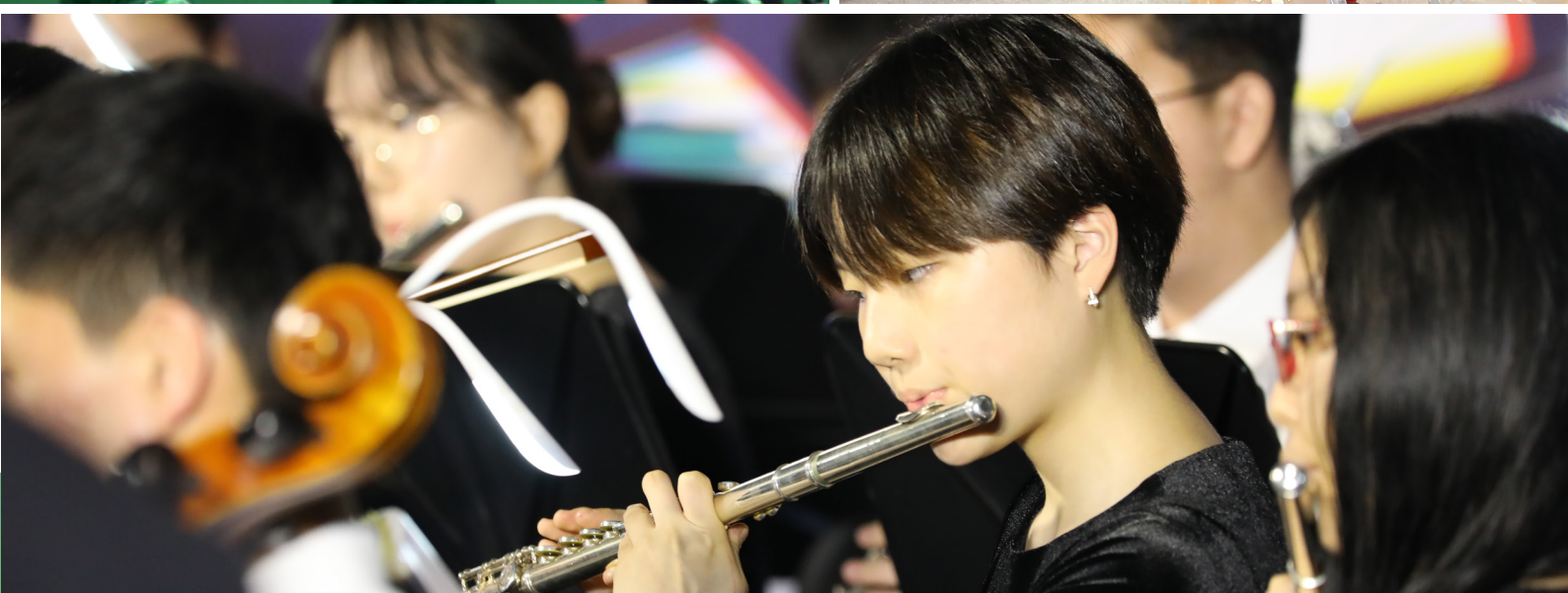
2024-2025



CONCORDIA

INTERNATIONAL SCHOOL HANOI





# Expected Student Learning Results

ABOUT CONCORDIA HANOI

## PURSUE PERSONAL EXCELLENCE

In Academics  
In Co-Curricular Activities  
and The Arts  
In Creative Endeavors  
In Critical Thinking



## BECOME ACTIVE GLOBAL CITIZENS

Value and Live Service  
Environmentally Responsible  
Respectful Community  
Members  
Cross Cultural  
Communicators



## MAKE ETHICAL DECISIONS

Value and Live with Integrity  
Respect Others  
Exhibit Stewardship  
of Resources  
(Time, Talent, and Treasure)







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# GENERAL INFORMATION

## **Curriculum**

Concordia Hanoi follows an American curriculum that best prepares students for US university admission. The curriculum is diverse and adaptable, within reason, to a student's interests and needs. Concordia Hanoi's leadership and counseling teams actively work with individual students and families to craft an enriching high school experience.

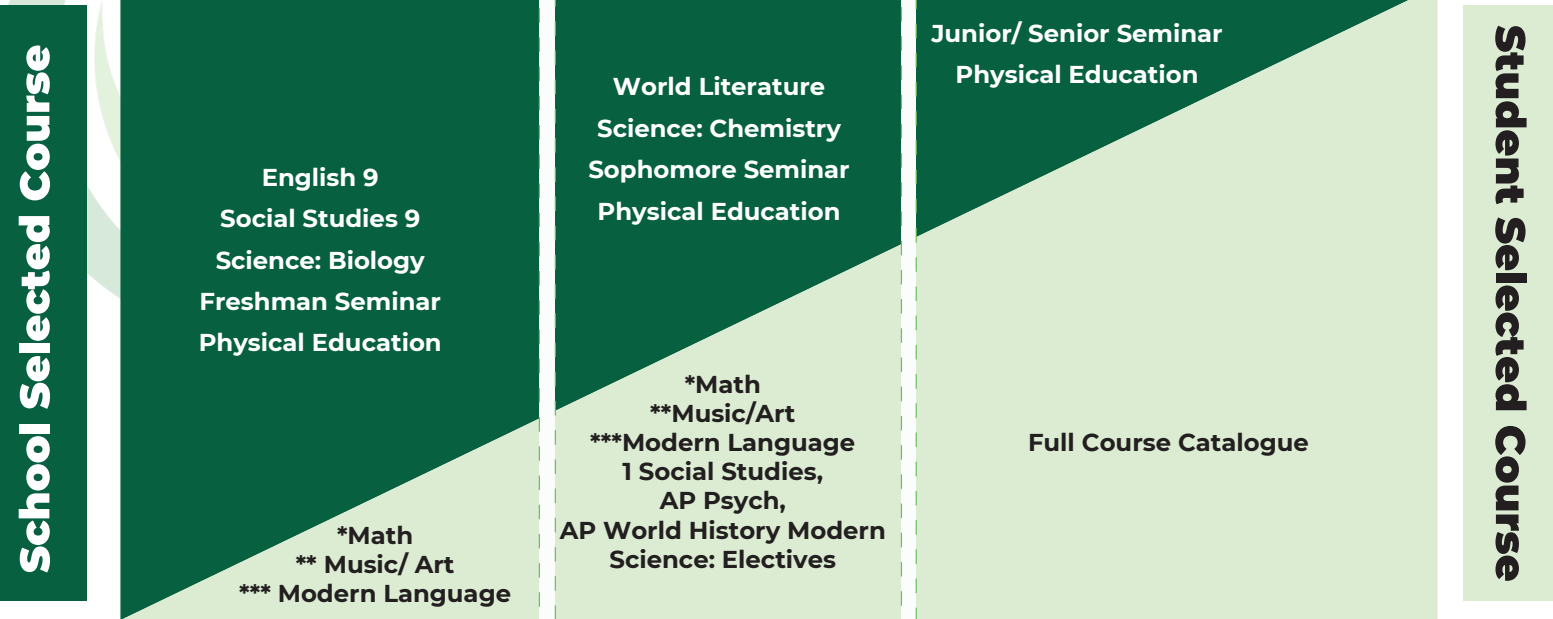
## **Course and Schedule Change**

Students' course schedules for a school year will be determined by the end of the semester prior to the start of a school year, based on available course offerings and course placement within the schedule. Students in grade 11 and below will not change their course schedule after the start of the school year.

## **Content and media in the Concordia curriculum**

At Concordia we recognize and respect the diversity of positions about what is considered acceptable content and media that students should be exposed to in their curriculum. Our teachers and administration are committed to including content and media that serves a specific learning goal, while respecting the diverse perspectives of our community. Should there be a disagreement or concern related to content or media shown in the school by students, or within the curriculum, please contact the school administration. We encourage and invite constructive and critical discussions about our learning community.

# Course Pathways



\*Math offerings include Algebra 1, Integrated Math, Geometry, Algebra 2 and precalculus to qualified students  
\*\*Music/Art offerings include HS Choir, HS Ensemble, HS Art  
\*\*\*Modern Language Offerings include Mandarin, Spanish, and AP courses to those that qualify

## Credits Required for Graduation

Graduation from Concordia (grades 9-12) requires the completion of the following high school course credits:

Required Courses	Minimum Credits
English	4
Social Studies	3
Science	3
Mathematics*	3
World Language	2
Fine Arts	2
Wellness Credits	Participation every year enrolled. Includes physical education, social emotional learning and health

\*Students must complete Algebra 2 as the minimum requirement for mathematics





## Advanced Placement (AP) Course

The AP Program at Concordia is a rigorous academic program that offers university-level courses and exams to our students. AP classes are completely elective; however, students who have demonstrated scholarship in prior related subjects are encouraged to consider AP classes. Concordia administration, counselors, and teachers are always available to advise students on appropriate course loads.

More than **90%** of 4-year colleges and universities in the U.S. grant advanced placement, credit, or both for successful scores on AP Exams, and **85%** of selective institutions report that a student's AP experience favorably impacts admission decisions.

## **AP Courses**

### **AP 2D Art and Design**

This is a full-year course developed to accommodate students who have demonstrated a strong interest and commitment to excel in computer generated artwork. Students will complete an AP 2-D Art and Design portfolio with an emphasis on computer generated media. All students will submit a portfolio at the end of the course that has followed the AP Art and Design Portfolio Submission requirements. With direct teacher instruction, the emphasis will be placed on the development of the AP Portfolio. The students will complete both sections (Sustained Investigation and Selected Work Quality Section) of the portfolio.

*Duration: 2 Semesters*

*Credit: 1.0*

*Prerequisite: Art 2/Advanced Art*

### **AP Drawing**

The AP Art Drawing course framework is composed of course skills, big ideas, and essential questions. Students will submit a drawing portfolio to the College Board with work that focuses on the use of mark-making, line, surface, space, light and shade, and composition. Students should consider marks that can be used to make drawings, the arrangement of marks, the materials and processes used to make marks, and relationships of marks and ideas. Each of the three skill categories consists of skills that encompass foundational to advanced learning over the span of the course. Students need to develop, practice, and apply these skills in a variety of contexts.

*Duration: 2 Semesters*

*Credit: 1.0*

*Prerequisite: Art 2/Advanced Art*

### **AP Biology**

Advanced Placement Biology Learn about the core scientific principles, theories, and processes governing living organisms, biological systems, and natural phenomena. Understand key science practices you can use to develop explanations and predictions of natural phenomena, which you will test and refine through laboratory investigations. Develop advanced reasoning and inquiry skills as you design experiments, collect and analyze data using mathematics and other methods, and interpret that data to draw conclusions.

*Credits: 1.0 Science*

*Prerequisite: Biology & Chemistry*

### **AP Chemistry**

The AP Chemistry course provides students with a college-level foundation to support future advanced coursework in chemistry. Students cultivate their understanding of chemistry through inquiry-based investigations, as they explore content such as: atomic structure, intermolecular forces and bonding, chemical reactions, kinetics, thermodynamics, and equilibrium.

*Duration: 2 Semesters*

*Credit: 1.0 Science*

*Prerequisite: Chemistry*

### **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 inter-relationships 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.

*Duration: 2 Semesters*

*Credit: 1.0*

*Prerequisite: Two years science (1 year life science and 1 year of chemistry recommended).*

## **AP Physics C: Mechanics**

AP Physics C: Mechanics is a calculus-based introductory college-level physics course. Students cultivate their understanding of physics by developing models of physical phenomena through inquiry-based investigations.

Students build their understanding of physical models as they explore and solve problems in these topics:

- Kinematics
- Forces and Translational Dynamics
- Work, Energy, and Power
- Linear Momentum
- Torque and Rotational Dynamics
- Energy and Momentum of Rotating Systems
- Oscillations

College course equivalence: AP Physics C: Mechanics is equivalent to the first course in an introductory college course sequence in calculus-based physics.

*Duration: 2 Semesters*

*Credit: 1.0*

*Prerequisite: Co-enrollment in pre-calculus (co-enrollment in AP Calculus recommended)*

## **AP Physics C: Electricity and Magnetism**

AP Physics C: Electricity and Magnetism is a calculus-based introductory college-level physics course. Students cultivate their understanding of physics by developing models of physical phenomena through inquiry-based investigations.

Students build their understanding of physical models as they explore and solve problems in these topics:

- Electric Charges, Fields, and Gauss's Law
- Electric Potential
- Conductors and Capacitors
- Electric Circuits
- Magnetic Fields and Electromagnetism
- Electromagnetic Induction

College course equivalence: AP Physics C: Electricity and Magnetism is equivalent to the second course in an introductory college course sequence in calculus-based physics.

*Duration: 2 Semesters*

*Credit: 1.0*

*Prerequisite: Completion of AP Physics C: Mechanics or Applied Physics. Co-enrollment in AP Calculus*

## **AP Calculus AB**

The curriculum for AP Calculus AB is equivalent to a first-semester college calculus course. Topics covered include limits, derivatives, applications of derivatives, integrals,

## **AP Courses**

and applications of integration. This is a college-level math course that includes many abstract mathematical ideas.

*Duration: 2 Semesters*

*Credit: 1.0*

*Prerequisite: Minimum B in Pre-Calculus (for AB), appropriate level of scholarship in prior courses*

## **AP Calculus BC**

AP Calculus BC is equivalent to two semesters of college-level calculus. Topics covered include all topics from Calculus AB (limits, derivatives, integrals) as well as more advanced integration methods, applications in parametric and polar settings, and a unit on infinite series. Because two semesters of college calculus are covered in a limited time, this course is demanding in its pace and its complexity. AP Calculus BC is intended for students who love math and enjoy spending time working on math-related topics. Upon completion of AP Calculus BC, students are prepared to advance into Multivariable Calculus and Linear Algebra.

*Duration: 2 Semesters*

*Credit: 1.0*

*Prerequisite: Pre-Calculus, with completion of the Honors curriculum*

## **AP Statistics**

Advanced Placement Statistics is the high school equivalent of a one semester, introductory college statistics course. In this course, students develop strategies for collecting, organizing, analyzing, and drawing conclusions from data. Students design, administer, and tabulate results from surveys and experiments. Probability and simulations aid students in constructing models for chance behavior. Sampling distributions provide the logical structure for confidence intervals and hypothesis tests. Students will use a TI-Nspire graphing calculator, and Web-based java applets to investigate statistical concepts. To develop effective statistical communication skills, students are required to prepare frequent written and oral analyses of real data. A TI-Nspire graphing calculator will be used extensively in class and on all forms of assessment.

*Duration: 2 Semesters*

*Credit: 1.0 Math*

*Prerequisite: Algebra 2*

## **AP Comparative Government and Politics**

AP Comparative Government and Politics introduces students to politics and governments around the world. No prior knowledge of politics and government are required. Students develop skills in comparative and analytical analysis and persuasive argumentation while examining the electorates, governments, policies, interest groups, civil societies and the economic and social challenges across six specific countries: The United Kingdom, Mexico, Nigeria, China, Russia and Iran. The class also examines policies of Vietnam, the ASEAN nations and the USA. Students examine the methods of political science, political and government institutions, the composition of civil society, electoral systems and global influences. Students investigate institutions and processes in these countries and analyze and interpret data to derive general understandings. The emphasis is on big ideas and broad trends that allow comparisons, as well as current events that influence the policies and governance of these countries.

*Open to Grades 11-12*



*Duration: 2 semesters*  
*Credit : 1.0*

## AP Economics

AP Economics is a full-year class comprising the AP Macroeconomics and AP Microeconomics courses. No prior study or knowledge of economics is required. AP Macroeconomics introduces students to the principles that apply to national economic systems as a whole and AP Microeconomics introduces students to the principles of economics that apply to individual markets and individual economic decision-makers. Students will develop skills in qualitative and quantitative analysis, accurate economic modeling and persuasive argumentation. The AP Macro component examines the components of national income and price-level determination, causes and consequences of inflation, unemployment and the effects of government economic planning. The international financial markets and the costs and benefits of international trade are also important aspects of macro analysis. The AP Micro component develops students' knowledge of the operation of productive markets, distribution of income, market failure, and the role of government in regulating and promoting economic activity. Students learn to use graphs, charts, and data to analyze and explain economic concepts. Students sit for both the AP Macroeconomics and the AP Microeconomics exams for potential college credit.

College Course Equivalent: AP Economics is the equivalent to two semesters of a college introductory Economics. (One semester of Macroeconomics and one semester of Microeconomics)

*Open to Grades 11-12*  
*Duration: 2 Semesters*  
*Credit 1.0*

## AP English Language and Composition

AP English Language and Composition is designed to represent college-level English studies and can earn students college credit. Students in this AP writing course study essays composed by writers from a variety of disciplines and periods, reading works by autobiographers, diarists, biographers, historians, critics, essayists, journalists, political commentators, scientific writers, and nature writers, among others. Close reading of a wide variety of such non-fiction works is encouraged in order to provide students with a solid foundation in analysis, a broad reading background and strong composition and persuasive writing skills. Extensive written rhetorical analyses are a major component of this class. Students compose essays under time restraints in preparation for AP timed writing tests. The course culminates in May with the AP English Language and Composition Exam, which tests students' understanding of how authors use language to convey meaning and persuade readers.

*Duration: 2 Semesters*  
*Credit: 1.0*  
*Prerequisite: recommendation by 10th or 11th grade English teacher (open to 11th and 12th graders)*

## AP Human Geography

AP Human Geography is a yearlong Advanced Placement course that culminates in a May exam designed by the College Board. The 7-unit curriculum provides a condensed overview of the work performed by modern geographers in the areas of cultural, political, urban, rural, and economic geography. Students will replicate many of the skills performed by geographical information scientists, including data analysis, source



## **AP Courses**

analysis, and scale analysis of contemporary examples drawn from the real world. By the end of the course, participants will be able to recognize patterns within the built environments they encounter around the world and will gain a deeper understanding of modern geopolitics. This fascinating, but blissfully less stressful AP course, is particularly suitable for students interested in pursuing degrees in economics, political science, history, or environmental science.

*Duration: 2 semester*

*Credit: 1*

*Prerequisite: None*

## **AP Modern World History**

In AP World History: Modern, students investigate significant events, individuals, developments, and processes from 1200 to the present. Students develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; developing historical arguments; making historical connections; and utilizing reasoning about comparison, causation, and continuity and change over time. The course provides six themes that students explore throughout the course in order to make connections among historical developments in different times and places; humans and the environment, cultural developments and interactions, governance, economic systems, social interactions and organizations, and technology and innovation.

*Duration: 2 Semesters*

*Credit: 1.0*

*Prerequisite: G10 - G12 Status*

## **AP Psychology**

AP Psychology is designed as a college-level introduction to the systematic study of human behavior and mental processes. The course is designed to comply with the AP Psychology Course and Exam Description provided by the College Board. Students study the development of psychology as a scientific discipline and the various approaches to psychology. They examine in detail the research methodology used by psychologists, and they become acquainted with the subfields of psychology. Students learn about the biological bases of behavior, sensation and perception, learning and cognition, motivation, developmental psychology, testing and individual differences, treatment of abnormal behavior, and social psychology. The course culminates in May with the AP Psychology Exam which assesses students' understanding of course content. The exam score is used by universities to decide whether or not to give college credit.

*Duration: 2 Semesters*

*Credit: 1.0*

*Prerequisites: None*

## **AP Chinese Language and Culture**

The AP Chinese Language and Culture course is designed for high school students who have successfully completed at least three years of Chinese courses. The course serves as both a Chinese language course as well as an introduction to the interdisciplinary field of Chinese culture. Through the course, students will further develop their communication skills and cultural competence. The primary focus is to provide students with the opportunity to experience a variety of themes in daily life, Chinese history, sociology, national and international issues, etc. This will deepen the students' immersion into the language and culture of the Chinese-speaking world and challenge the students to use language as a means to study different disciplines and



topics, rather than just the language itself. The goal of this course is that, by the end of the school year, students are expected to perform at the intermediate range across the three communication modes; interpretive, interpersonal, and presentation as described in the ACTFL Performance Descriptors for Language Learners.

*Duration: 2 Semester*

*Credit: 1.0*

*Prerequisite: Successful completion of Mandarin Intermediate High and teacher recommendation*

## **AP Spanish Language and Culture**

AP Spanish Language and Culture is for students who have successfully completed Spanish Intermediate High or demonstrate proficiency through a placement test. Aligned with the College Board's Advanced Placement curriculum, this course is conducted exclusively in Spanish. It covers unit themes guided by the College Board, exploring language, culture, and history related with Families and Communities; Science and Technology; Beauty and Aesthetics; Contemporary Life, Global Challenges, and Personal and Public Identities. Successful completion substantiates as an approved university-level class.

*Duration: 2 Semesters*

*Credit: 1.0*

*Prerequisite: Successful completion of Spanish Intermediate High*

# APPLIED LEARNING LAB



## Big Data 1

Big Data Analytics in the simplest of terms refers to the tools, processes and procedures allowing an organization to create, manipulate, and manage very large data sets and storage facilities. The process of sifting through sheer quantities of data proves to be a demanding process for any person to do. Big Data Analytics is a course that encompasses information technology, science and mathematics. This course will focus on the conceptual understanding and the application theory behind Big Data Analytics rather than explicit formulas and technical jargons. The main objective for this course is to create “awareness” and to be exposed to the realm of big data and the hidden dangers it might bring. This course will include some hands on experience utilizing big data analytics to solve some practical real life projects. Upon completion, you will be more aware about this big data phenomenon.

*Duration: 1 Semester*

*Credit: 0.5*

*Prerequisite: Algebra 2*

## Big Data 2

Big Data 2 is the sequel to the Big Data 1 course, diving deeper into the fascinating world of data analysis. This course shifts the focus towards the practical aspects of working with big data, concentrating on model creation and the use of programming tools to collect, clean, process, and analyze extensive datasets. This course interweaves elements of information technology, science, and mathematics, emphasizing the application of these disciplines in the context of data science. This project-based course aims to provide a hands-on experience in dealing with real-world data challenges. Students will learn how to create models that can make sense of large amounts of information and use these models to draw meaningful conclusions. The course is not just about learning the tools but also about understanding the process of making data-driven decisions. By the end of Big Data 2, students will have enhanced their skills in managing and analyzing data. They will gain practical experience that prepares them for the challenges and opportunities presented by the ever-growing data-driven world. This course is an excellent stepping stone for those interested in careers in data science, analytics, and related fields.

*Duration: 1 Semester*

*Credit: 0.5*

*Prerequisite: Big Data 1*

## The Machine Learning 1

The Machine Learning 1 course serves as a captivating window into the realm of modern technology and problem-solving. Machine learning, a groundbreaking subset of artificial intelligence, empowers computers to learn and improve from experience, allowing them to make predictions and decisions. From self-driving cars to personalized recommendations on streaming platforms, machine learning shapes the world around us.

As machine learning proliferates across industries like healthcare, finance, and entertainment, the demand for individuals well-versed in this field continues to soar. This course is uniquely designed to empower students with a foundational understanding of machine learning concepts, types, applications, and practical implementation. The course will cover various aspects of machine learning, from basic linear models to more advanced deep learning techniques. The course will be project-based, allowing students to propose, develop, and present their own machine learning





### **Applied Learning Lab**

projects in real-world contexts.

*Duration: 1 Semesters*

*Credit: 0.5*

## **Machine Learning 2**

The Machine Learning 2 course, following the introductory Machine Learning 1, is an advanced journey into the specialized domain of deep learning within the broader field of artificial intelligence. Deep learning, a branch of machine learning, is characterized by algorithms known as neural networks, which are inspired by the structure and function of the human brain. These networks enable machines to analyze and interpret complex data.

As deep learning continues to transform industries such as robotics, healthcare, and automated systems, the need for adept individuals in this niche is escalating. This course is structured to deepen students' understanding of deep learning concepts, focusing on the intricacies of neural network architectures, including convolutional and recurrent neural networks. Students will explore the applications of deep learning, understanding how it drives innovations and solves complex problems in various sectors.

Emphasizing a project-based learning approach, Machine Learning 2 empowers students to apply their knowledge in practical scenarios. They will have the opportunity to conceptualize, develop, and present their own projects. This hands-on experience not only enhances their technical skills but also fosters critical thinking, problem-solving, and collaborative abilities, preparing them for the rapidly evolving landscape of machine learning and artificial intelligence.

*Duration: 1 Semester*

*Credit: 0.5*

*Prerequisite: Machine Learning 1*

## **Robotics 1**

Introduction to Robotics introduces students to the field of Robotics and stimulates their interests in science and engineering through the participation of the entire engineering design process. This course covers a variety of multidisciplinary topics necessary to understand the fundamentals of designing, building, and programming robots. During this course, students will be required to gradually complete the design and construction of a robot using the Vex V5 Competition Super Kit following the constraints and objectives for competing on the final project challenge.

*Duration: 1 Semester*

*Credit: 0.5*

## **Robotics 2**

Building on from Intro Robotics, the Sensors and Coding course introduces the electrical foundations and mechatronic concepts such as using sensors to detect obstacles, boundaries, and colors. Students will learn how to attach and use bump sensors and vision sensors to the previously assembled drive train. Students will learn more coding for creating a basic autonomous robot that can detect obstacles and navigate through a predetermined path.

*Duration: 1 Semester*

Credit: 0.5  
Prerequisite: Robotics 1

### Robotics 3

The Automation and Problem Solving course builds on from Robotics 1 and 2. This course builds on the concepts of using sensors to build autonomous robots to solve problems. Students will learn more advanced coding techniques in order to solve more complex problems involving motion of the drivetrain, lift kit, and claw. Students will continue their learning with bump sensors and vision sensors and an additional ultrasonic range-finder.

Duration: 1 Semester  
Credit: 0.5  
Prerequisite: Robotics 1 and 2

### Robotics 4

The Advanced Problem Solving course is the culminating Robotics course. Students will work with their teacher and classmates to identify unique problems to solve that will develop their creative problem solving skills learned in levels 1-3. This course will require an extensive understanding of coding and automation and will challenge students to seek out real-life problems where they can use their robotics skills to develop prototypes that could serve as possible solutions to their chosen problem.

Duration: 1 Semester  
Credit: 0.5  
Prerequisite: Robotics Levels 1-3

### STEAM LAB 1

The STEAM Lab 1 is designed to boost student's creativity, knowledge and skills in the fields of Science, Technology, Engineering, Art and Math (STEAM). This hands-on course covers the fundamentals of engineering design, programming, 3D modelling and printing, and electronics, with a focus on Arduino/Raspberry Pi based projects. During this course, students will be challenged to make use of their creativity, critical thinking, perseverance, and new set of acquired skills, to identify and solve practical problems and/or to create interactive art pieces. From constructing simple autonomous robots to building rockets, the limit is the student's imagination

Duration: 1 semester  
Credit: 0.5

### STEAM LAB 2

The STEAM Lab 2 builds upon the foundational skills developed in STEAM Lab 1, further enhancing students' creativity, knowledge, and skills across Science, Technology, Engineering, Art, and Math (STEAM). This iteration places a special focus on the Internet of Things (IoT), guiding students through the essentials of engineering design, programming, 3D modeling and printing, and electronics. A significant component of the course is dedicated to IoT, with students engaging in Arduino/Raspberry Pi based projects that incorporate IoT elements. For example, students might undertake a project such as creating a smart garden system. This system, using Arduino, could monitor environmental conditions like soil moisture, temperature, and light levels, automatically adjusting watering or lighting to optimally grow plants. Importantly, IoT technology allows users to control and manage these systems from anywhere in the world over the internet, offering a powerful demonstration of remote monitoring

### **Applied Learning Lab**

and management capabilities. The project exemplifies how IoT can be integrated into everyday tasks, offering practical, real-world applications of the technology. This hands-on approach empowers students to conceptualize and develop their own IoT projects, applying their creativity, critical thinking, perseverance, and the comprehensive skill set acquired. They are encouraged to solve real-world problems or create interactive, connected art installations, thus pushing the limits of their imagination and bringing their visionary IoT projects to life.

*Duration: 1 semester*

*Credit: 0.5*

*Prerequisite: Completion of STEAM Lab 1*

### **STEAM Lab 3**

In STEAM Lab 3, the curriculum is uniquely flexible, adapting to the interests and curiosities of each student. While the course has the capacity to cover a wide array of subjects, the specific topics explored depend on the individual choices of the students. This could include Web Development, where students might create and design their own websites, or 3D Modeling, focusing on digital design techniques. For those interested in programming, the course can cover various Programming Languages, tailored to student preferences. Additionally, students curious about Artificial Intelligence could delve into AI tools and algorithms. The course's structure allows students to direct their learning journey, choosing subjects that align with their interests and career aspirations, thereby fostering a personalized and deeply engaging educational experience. STEAM LAB 4 not only enhances their technical skills but also empowers them to drive their learning based on their passions and interests. This approach prepares students for advanced academic pursuits and careers in technology and science, equipping them with the skills to become pioneers in their chosen fields.

*Duration: 1 semester*

*Credit: 0.5*

*Prerequisites: STEAM LAB 2*

### **STEAM Lab 4**

STEAM Lab 4 is a continuation of STEAM Lab 3, where students have the opportunity to either expand upon their projects from STEAM Lab 3 or embark on new ventures, utilizing their newly acquired knowledge. They can also learn new technology subjects, ranging from Web Design to Machine Learning. Like STEAM Lab 3, this course remains exceptionally adaptable and is shaped by the unique interests and curiosities of each student.

*Duration: 1 semester*

*Credit: 0.5*

*Prerequisites: STEAM LAB 3*

### **Computer Programming**

The Computer Programming course is an introduction to the field of software development. A significant portion of this course is dedicated to the creation and refinement of computer programs that effectively address specific problems. The curriculum strongly focuses on the aspects of design that contribute to making programs comprehensible, flexible, and reusable. The course places a strong emphasis on developing problem-solving skills and algorithmic thinking. Additionally, it includes a fundamental understanding of the key hardware and software elements of computer systems.



A distinctive feature of this curriculum is its integration of application and project-based learning, equipping learners with hands-on experience in the conception and development of their own software solutions. This approach not only enhances technical skills but also fosters creativity and teamwork, preparing students for future challenges.

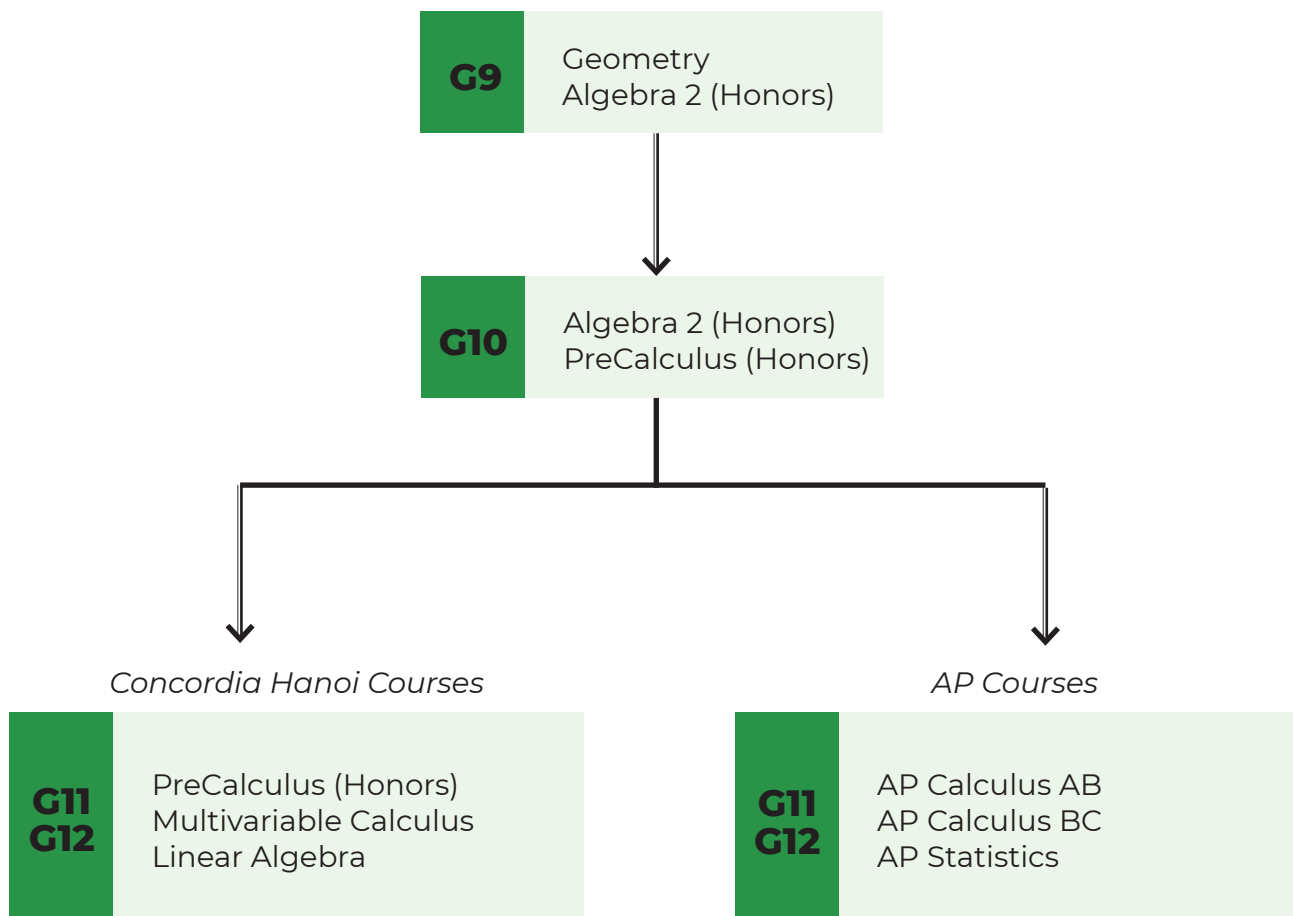
Moreover, this course also includes an introductory module on the use of AI tools to support programming. This module will introduce students to the latest advancements in AI that can assist in various stages of software development, such as automated code generation, debugging, and optimization. By integrating AI tools, students will learn how to enhance their programming practices and explore innovative ways to approach software development challenges. This addition ensures that students are not only prepared for current industry standards but are also equipped to adapt to emerging technologies in the field of programming.

*Duration: 2 Semesters*

*Credit: 1.0*

# MATHEMATICS

The mathematics curriculum is designed to meet the needs of students who have varying backgrounds, knowledge and skills, as well as diverse interests and career goals. The goals of the mathematics program are to provide opportunities for students to challenge themselves and to encourage them to do so; provide students with options and, wherever possible, keep doors open to high-level math offerings; ensure that all students learn what they need for college success and advancement.



*This chart is meant to present the available courses for each grade level.*

## Geometry

In Geometry, students will study inductive and deductive reasoning, geometric terms, geometric shapes and constructions, areas and volumes, transformations, the Pythagorean Theorem, trigonometry and geometric proofs. An emphasis is placed on problem solving, real life applications, an integrated review of Algebra and application of technology.

*Duration: 2 Semesters*

*Credit: 1.0 Math*

*Prerequisite: None*

## Algebra 2

Algebra 2 completes the development of mathematical core knowledge. The course will guide students through quadratic functions and factoring, polynomial functions, rational exponents and radical functions, exponential and logarithmic functions, rational functions, quadratic relations and conic sections, trigonometric ratios and functions, and trigonometric graphs and identities. An emphasis is placed on problem solving and real life applications. A TI-Nspire graphing calculator will be used extensively in class and on most assessments.

*Duration: 2 Semesters*

*Credit: 1.0 Math*

*Prerequisite: Algebra 1 or Applied Algebra*

## Algebra 2 Honors

Algebra 2 Honors completes the development of mathematical core knowledge. The course will guide students through quadratic functions and factoring, polynomial functions, rational exponents and radical functions, exponential and logarithmic functions, rational functions, quadratic relations and conic sections, trigonometric ratios and functions, and trigonometric graphs and identities, the binomial theorem, and sequences and series. An emphasis is placed on problem solving and real life applications. A TI-Nspire graphing calculator will be used extensively in class and on most assessments.

*Duration: 2 Semesters*

*Credit: 1.0 Math*

*Prerequisite: Algebra 1*

## Precalculus

Precalculus students do an in-depth study of polynomial functions and inequalities, exponents and logarithms, analytic geometry, conic sections, sequences, and series, trigonometry limits and introductory calculus. An emphasis is placed on problem solving, real life applications and the use of technology. A TI-Nspire graphing calculator is a required device that a student needs to provide for this course as it is used extensively in class and on most assessments.

*Duration: 2 Semesters*

*Credit: 1.0 Math*

*Prerequisite: Algebra 2*

## Precalculus Honors

Precalculus students do an in-depth study of polynomial functions and inequalities,



## **Mathematics**

exponents and logarithms, analytic geometry, conic sections, sequences, and series, trigonometry limits and introductory calculus. It also covers partial fractions, proof by induction, conics in polar, and complex roots. An emphasis is placed on problem solving, real life applications and the use of technology. A TI-Nspire graphing calculator is a required device that a student needs to provide for this course as it is used extensively in class and on most assessments.

*Duration: 2 Semesters*

*Credit: 1.0 Math*

*Prerequisite: Honors Algebra 2 or Algebra 2 with teacher recommendation*

## **AP Calculus AB**

The curriculum for AP Calculus AB is equivalent to a first-semester college calculus course. Topics covered include limits, derivatives, applications of derivatives, integrals, and applications of integration. This is a college-level math course that includes many abstract mathematical ideas.

*Duration: 2 Semesters*

*Credit: 1.0*

*Prerequisite: Minimum B in Pre-Calculus (for AB), appropriate level of scholarship in prior courses*

## **AP Calculus BC**

AP Calculus BC is equivalent to two semesters of college-level calculus. Topics covered include all topics from Calculus AB (limits, derivatives, integrals) as well as more advanced integration methods, applications in parametric and polar settings, and a unit on infinite series. Because two semesters of college calculus are covered in a limited time, this course is demanding in its pace and its complexity. AP Calculus BC is intended for students who love math and enjoy spending time working on math-related topics. Upon completion of AP Calculus BC, students are prepared to advance into Multivariable Calculus and Linear Algebra.

*Duration: 2 Semesters*

*Credit: 1.0*

*Prerequisite: Pre-Calculus, with completion of the Honors curriculum*

## **Multivariable Calculus (Dual Credit)**

This course is designed to take the concepts that students have already learned in Calculus I and II and expand these into three dimensions. Topics explored will include three dimensional graphing, Partial Derivatives, Extrema of functions with 2 independent variables, double and triple integrals. All topics include applications in engineering, physics and other discipline areas. The students who successfully complete the course receive both high school and college credit from Concordia University, Nebraska.

*Duration: 1 Semester*

*Credit: 0.5*

*Prerequisite: Minimum grade 'B-' in Calculus BC, Teacher Recommendation*

## **Linear Algebra (Dual Credit)**

This course is designed to introduce students to introductory topics of linear algebra. Topics explored will include linear systems, linear transformations, orthonormal bases, the Gram-Schmidt orthogonalization process, least squares curve fitting procedures, eigenvalues, eigenvectors and differential equations. The students who enrol in the

dual credit option and successfully complete the course receive both high school and college credit for their work in the course from Concordia University, Nebraska.

*Duration: 1 Semester*

*Credit: 0.5//1.0 Math*

*Prerequisite: Minimum grade 'C' in Multi- Variable Calculus, Teacher Recommendation*

## **AP Statistics**

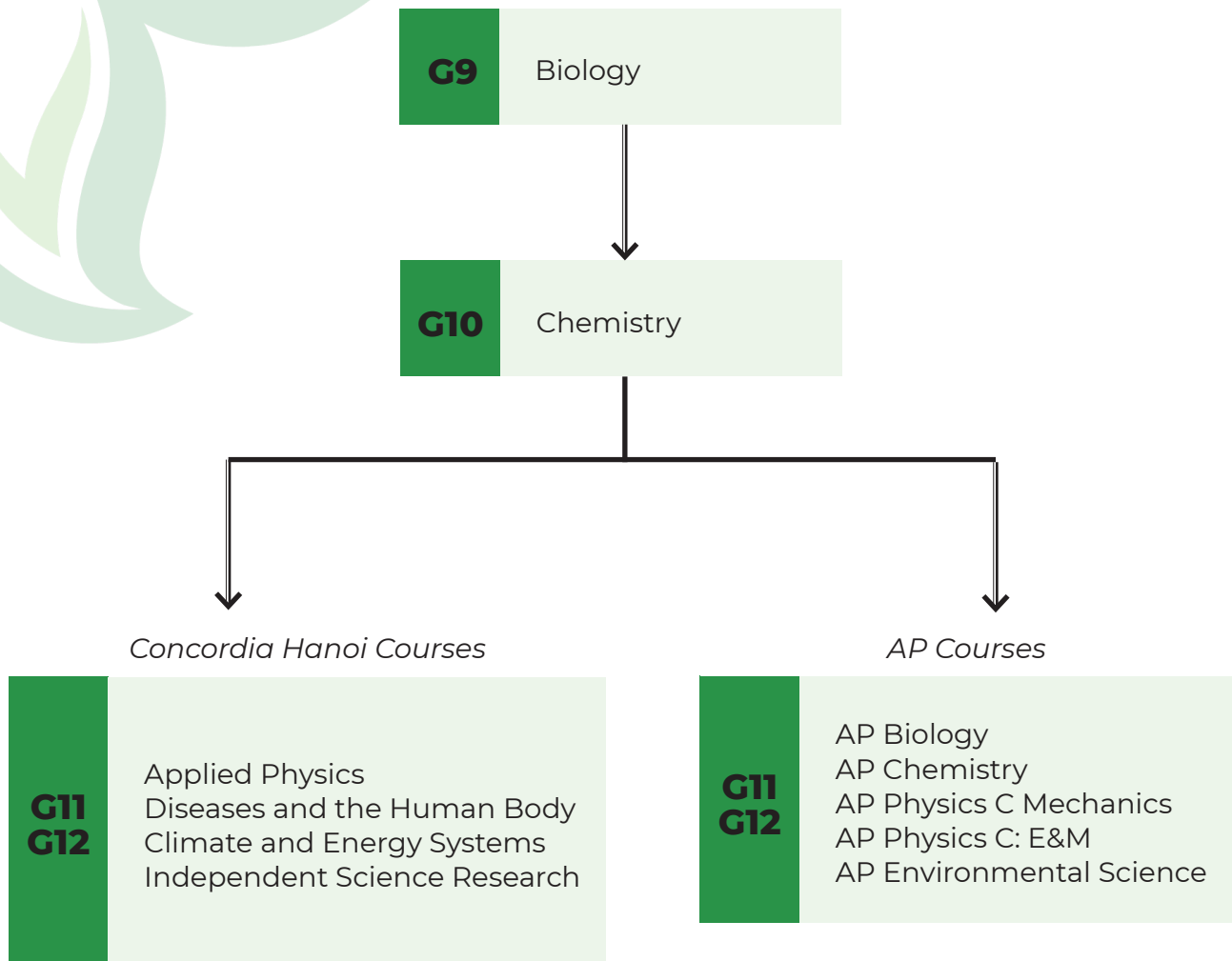
Advanced Placement Statistics is the high school equivalent of a one semester, introductory college statistics course. In this course, students develop strategies for collecting, organizing, analyzing, and drawing conclusions from data. Students design, administer, and tabulate results from surveys and experiments. Probability and simulations aid students in constructing models for chance behavior. Sampling distributions provide the logical structure for confidence intervals and hypothesis tests. Students will use a TI-Nspire graphing calculator, and Web-based java applets to investigate statistical concepts. To develop effective statistical communication skills, students are required to prepare frequent written and oral analyses of real data. A TI-Nspire graphing calculator will be used extensively in class and on all forms of assessment.

*Duration: 2 Semesters*

*Credit: 1.0 Math*

*Prerequisite: Algebra 2*

# SCIENCE



*This chart is meant to present the available courses for each grade level.*





## Applied Physics

Applied Physics studies the mathematical relationships and scientific processes of the world around us in a project based, hands on curriculum. This course covers the main concepts of mechanics in both linear and rotational frames.

*Duration: 2 Semesters*

*Credits: 1.0 Science*

*Prerequisite: In progress or completion of Precalculus*

## Biology

Biology is the study of life. During the course of the year students examine ecology, cells, genetics, and evolution. These four areas provide a solid basis for further study in biology. Labs and activities are used to enhance student learning and understanding throughout the year.

*Duration: 2 Semesters*

*Credit: 1.0 Science*

*Prerequisite: None*

## Chemistry

In Chemistry, an emphasis is placed on the development of a structured-logical method to problem solving. The program includes concepts and terms that form a basis for high school chemistry. Students are introduced to atomic theory, gas laws, periodicity, molecular theory, acids, bases and salts, solutions and chemical reactions. The relationship of each of these topics to atomic structure will also be examined. Integrated laboratory experiments are designed to reinforce chemistry concepts, to develop a wide range of laboratory skills, data analysis techniques and experimental reporting.

*Duration: 2 Semesters*

*Credit: 1.0 Science*

*Prerequisite: Biology*

## Climate and Energy Systems

Climate and Energy Systems takes a critical look at the delicate balance of energy on our planet. You will look at the energy we consume, the impacts that disruptions caused by humans may have on the future of our planet, and the ways that Earth responds to these disruptions.

*Duration: 2 Semester*

*Credit: 1.0 Science*

*Prerequisite: Completed or currently enrolled in Algebra 2*

## Diseases and the Human Body

Diseases and the Human Body is a course that explores the physiology of the human body, the systems that allow it to function, and the microbes that try to disrupt that function. In this course, students will learn anatomy and physiology of humans before switching gears to develop an understanding of how bacteria and viruses make us sick and how we fight back against them.

*Duration: 1 year*

*Credit: 1.0 Science*



## Science

### Independent Science Research

In Independent Science Research, Students will develop and carry out an independent investigation in one of the lab sciences under the guidance of one or more faculty members. Through a research based and scientific process, students will develop new knowledge by designing and conducting an investigation that iterates on current knowledge published in an area of the student's interests. Through this one year class, students will review literature existing in a field, propose hypotheses, conduct experiments, and communicate findings in order to answer a question that science has not yet answered. The end goal of this course is to have a project that may be entered into a science fair or a paper that may be published in an academic journal.

*Duration: 2 Semesters*

*Credit: 1.0*

*Prerequisite: At least 1 AP Science credit*

### AP Biology

Advanced Placement Biology Learn about the core scientific principles, theories, and processes governing living organisms, biological systems, and natural phenomena. Understand key science practices you can use to develop explanations and predictions of natural phenomena, which you will test and refine through laboratory investigations. Develop advanced reasoning and inquiry skills as you design experiments, collect and analyze data using mathematics and other methods, and interpret that data to draw conclusions.

*Credits: 1.0 Science*

*Prerequisite: Biology & Chemistry*

### AP Chemistry

The AP Chemistry course provides students with a college-level foundation to support future advanced coursework in chemistry. Students cultivate their understanding of chemistry through inquiry-based investigations, as they explore content such as: atomic structure, intermolecular forces and bonding, chemical reactions, kinetics, thermodynamics, and equilibrium.

*Duration: 2 Semesters*

*Credit: 1.0 Science*

*Prerequisite: Chemistry*

### 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 inter-relationships 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.

*Duration: 2 Semesters*

*Credit: 1.0*

*Prerequisite: Two years science (1 year life science and 1 year of chemistry recommended)*

### AP Physics C: Mechanics

AP Physics C: Mechanics is a calculus-based introductory college-level physics course.

Students cultivate their understanding of physics by developing models of physical phenomena through inquiry-based investigations. Students build their understanding of physical models as they explore and solve problems in these topics:

- Kinematics
- Forces and Translational Dynamics
- Work, Energy, and Power
- Linear Momentum
- Torque and Rotational Dynamics
- Energy and Momentum of Rotating Systems
- Oscillations

College course equivalence: AP Physics C: Mechanics is equivalent to the first course in an introductory college course sequence in calculus-based physics.

*Duration: 2 Semesters*

*Credit: 1.0*

*Prerequisite: Co-enrollment in pre-calculus with teacher recommendation -or- co-enrollment in AP Calculus (recommended)" AP Physics C: E&M*

## **AP Physics C: Electricity and Magnetism**

AP Physics C: Electricity and Magnetism is a calculus-based introductory college-level physics course. Students cultivate their understanding of physics by developing models of

physical phenomena through inquiry-based investigations.

Students build their understanding of physical models as they explore and solve problems in these topics:

- Electric Charges, Fields, and Gauss's Law
- Electric Potential
- Conductors and Capacitors
- Electric Circuits
- Magnetic Fields and Electromagnetism
- Electromagnetic Induction

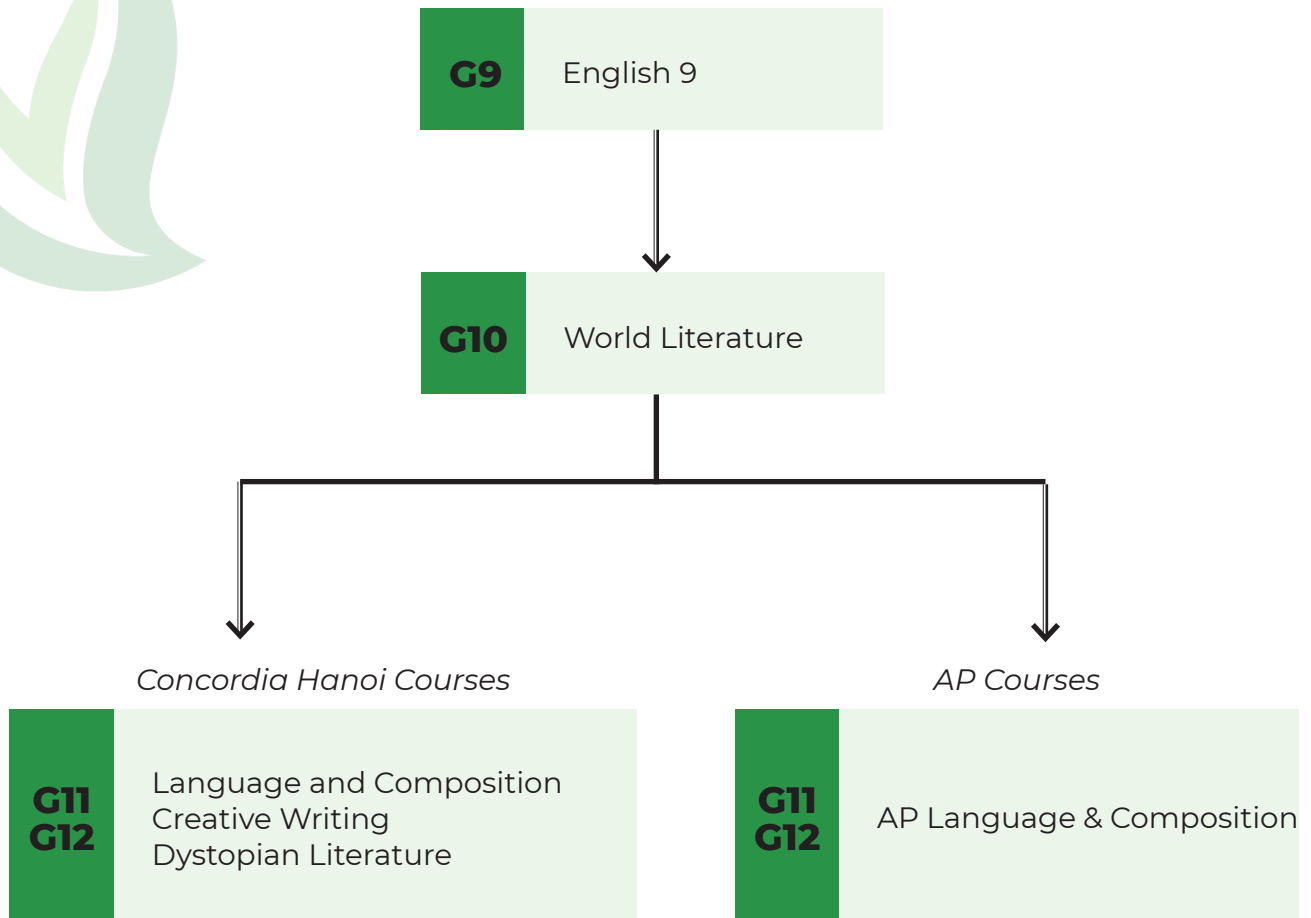
College course equivalence: AP Physics C: Electricity and Magnetism is equivalent to the second course in an introductory college course sequence in calculus-based physics.

*Duration: 2 Semesters*

*Credit: 1.0*

*Prerequisite: Completion of AP Physics C: Mechanics or Applied Physics. Co-enrollment in AP Calculus*

# ENGLISH



*This chart is meant to present the available courses for each grade level.*





## Creative Writing

Creative Writing is a one-semester elective designed to help students develop skills in self-expression through stories, poetry, personal essays, and scripts. Students learn to identify the successful elements of an effective piece of creative writing through mentor texts. And they trade useful feedback on their own writing with peers in class. The course encourages students to experience writing as a tool for intellectual exploration and self-discovery as well as an outlet for their creativity. In addition to writing projects, some writing is done at the beginning of every class period through the use of prompts.

*Duration: 1 Semester*

*Credits: 0.5 English*

*Prerequisite: G11 or G12 status*

## Dystopian Literature

Dystopian Literature is a longstanding tradition of storytelling that tries to help us all see the potential consequences of choosing the wrong future for ourselves. As such, DysLit is one of the most engaging genres in all of literature with its focus on humanity's place in the world, grand ideas, the fine line between the improbable and the impossible, and the crucial debate between "Can we? Vs. Should We?" DysLit utilizes a variety of literary forms and media to explore a wide range of intellectual and social questions. Students will engage in literary analysis, critique authors, improve visual literacy, and develop creative writing abilities.

*Duration: 1 Semester*

*Credit: 0.5 English*

*Prerequisite: G11 or 12 status*

## English 9

English 9 is a course that seeks to foster a love of reading, writing, academic discourse, and the English language. Throughout the year, students will be exposed to a variety of literary genres including classical and contemporary novels, short stories, poetry, articles, and graphic novels. Additionally, this course will provide consistent opportunities for strengthening sound writing techniques where students hone their writing skills through varied tasks, with a strong emphasis on evidence based analysis. Students will experience various modes of writing including argumentative, narrative, and expository. In learning to write for a variety of purposes, students will also grow in their knowledge of English grammar, composition, and sentence fluency. Lastly, students will be offered frequent opportunities for meaningful reflection, collaboration, and discussion. English 9 not only builds a foundational knowledge of literary analysis and critical thinking strategies, but also encourages our students to become more conscientious and purpose driven global citizens. This course will prepare students to apply language and analytic thinking skills to all subjects throughout their high school career.

*Duration: 2 Semesters*

*Credit: 1.0 English*

*Prerequisite: None*

## Language and Composition

Language and Composition for grades 11 and 12 aims to develop students' ability to draw and communicate conclusions on an array of non-fiction texts through rhetorical



## **English**

analysis. Towards this end, the course employs a methodical approach to constantly examine and discuss the rhetorical choices made by various “speakers” to evaluate how well they achieved their intended effect. Students will communicate the insights they gather from independent and collaborative text analysis through essays and public speeches. More advanced writing strategies will be taught, modeled, and practiced to develop a sophisticated level of essay-writing and speech making appropriate to transition into an undergraduate rhetoric course.

*Duration: 2 Semesters*

*Credit: 1.0*

*Prerequisite: G11 or G12 status*

## **World Literature**

World Lit for 10th graders is designed to introduce students to a variety of literature from around the world and from different time periods. Students learn to read the works closely, appreciate their variety, analyze them thoroughly, and write about them intelligently. We examine the works for themes like third culture identity development, love, jealousy, racism, friendship, the ethics of science, and the meaning of success. Students first review the basic skills of literary analysis while reading short stories, then employ those skills when reading longer works of fiction, drama, and poetry.

*Duration: 2 Semesters*

*Credit: 1.0 English*

*Prerequisite: English 9*

## **AP English Language and Composition**

AP English Language and Composition is designed to represent college-level English studies and can earn students college credit. Students in this AP writing course study essays composed by writers from a variety of disciplines and periods, reading works by autobiographers, diarists, biographers, historians, critics, essayists, journalists, political commentators, scientific writers, and nature writers, among others. Close reading of a wide variety of such non-fiction works is encouraged in order to provide students with a solid foundation in analysis, a broad reading background and strong composition and persuasive writing skills. Extensive written rhetorical analyses are a major component of this class. Students compose essays under time restraints in preparation for AP timed writing tests. The course culminates in May with the AP English Language and Composition Exam, which tests students’ understanding of how authors use language to convey meaning and persuade readers.

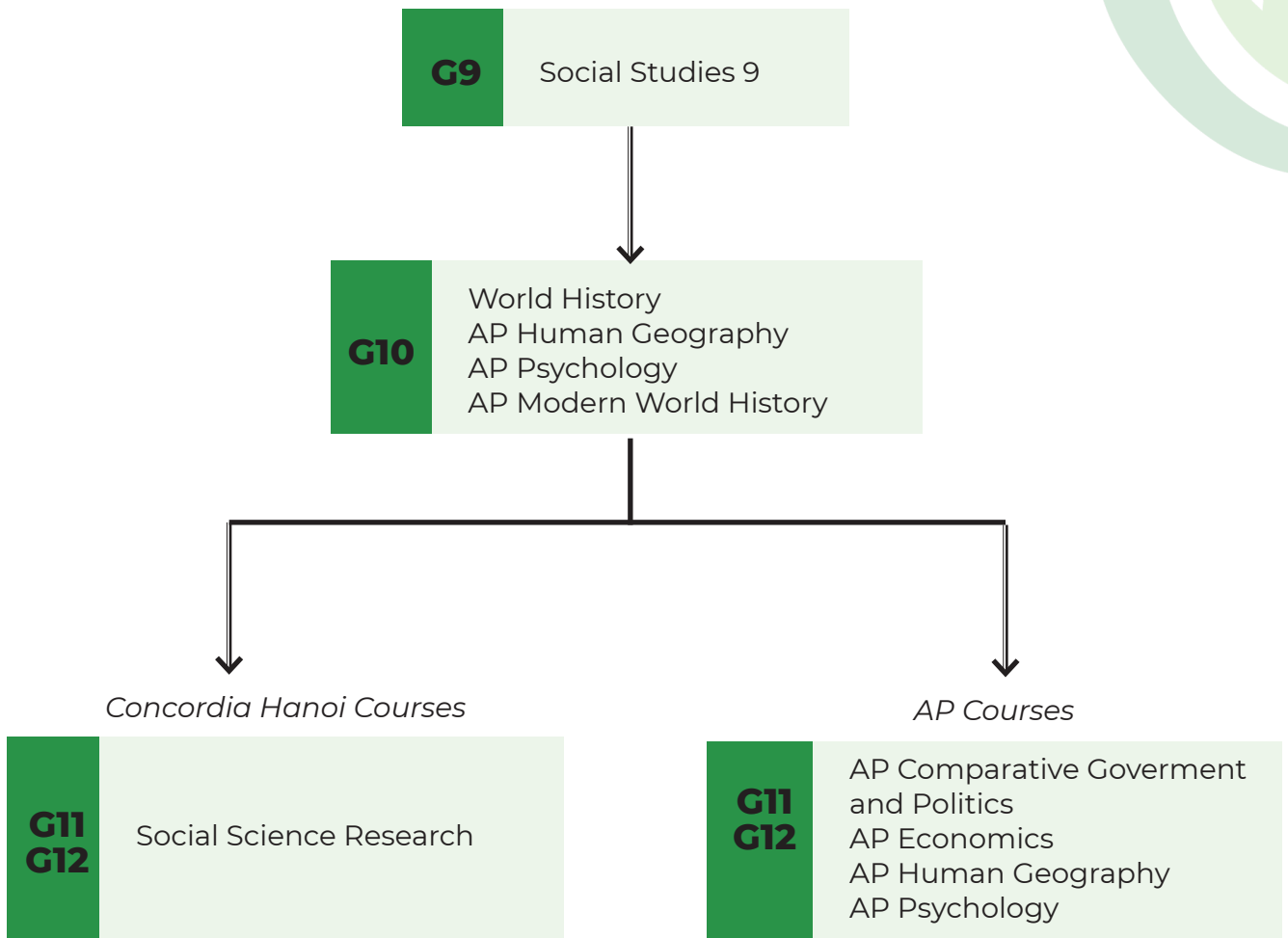
*Duration: 2 Semesters*

*Duration: 2 Semesters*

*Credit: 1.0*

*Prerequisite: recommendation by 10th or 11th grade English teacher (open to 11th and 12th graders)”*

# SOCIAL STUDIES



*This chart is meant to present the available courses for each grade level.*

## **Social Studies 9**

Social Studies 9 encompasses the study of Ancient World History and Geography tracing the development of civilizations around the world from prehistory to 1200. The course builds students' essential skills and helps to prepare them for a range of history and social science coursework during high school including preparation for AP level courses. The course covers major themes in world history, including the development and influence of human-geographic relationships, political and social structures, economic systems, major religions and belief systems, science/technology, and the arts. Students will critically evaluate and incorporate evidence (i.e., analyze primary and secondary sources, assess patterns in qualitative and quantitative evidence, make claims, support evidence, and contextualize), as well as explain historical and geographic relationships (i.e., causation, comparison, and continuity and change over time). Using the tools of the historian and geographer, students will examine questions and build arguments leading them to make connections to evidence from the past and hone their argumentative writing skills.

*Duration: 2 Semesters*

*Credit: 1.0 Social Studies*

*Prerequisite: None*

## **Social Science Research**

Social Science Research is an innovative elective course offered to upperclassmen and designed to immerse high school students in the complexities and nuances of the research process within the social sciences. This course adheres to the rigorous standards of the AERO Social Studies Curriculum Framework, ensuring a comprehensive, interdisciplinary educational experience. It aims to cultivate a generation of knowledgeable, analytical, and active global citizens who are adept at addressing societal challenges. Throughout the course, students will acquire foundational knowledge in research methodologies, encompassing aspects like inquiry, source analysis, and effective communication of findings through diverse mediums such as documentaries, exhibits, papers, performances, and websites. A significant focus is placed on research- and evidence-based analysis, encouraging students to develop a critical and inquisitive mindset. Key components of the curriculum include: Developing questions and planning inquiries; Applying disciplinary concepts and tools; Evaluating sources and using evidence; and Communicating conclusions. Students will be trained to: Develop and articulate insightful questions and plan detailed inquiries; Analyze texts for point of view and purpose, understanding diverse perspectives; Write compelling, discipline-specific arguments; Gather and integrate information from various sources, ensuring credibility and accuracy while avoiding plagiarism; Utilize evidence from texts to support analysis and research; Effectively present information and findings in a coherent manner suitable for diverse tasks, purposes, and audiences; and Employ comparative analysis using various topics and lenses. By the end of this course, students are expected to apply analytic thinking skills and adopt an inquiry-based approach not only within the realm of social sciences but across all subjects throughout their high school career and beyond. The course equips them with the intellectual tools to identify societal problems, conduct robust investigations, evaluate solutions, distinguish evidence-based claims from personal opinions, and communicate their findings effectively. More importantly, it instills in them the capability and commitment to engage in this critical process continually.

*Duration: 2 Semesters*

*Credit: 1.0 Social Science Elective*

*Prerequisite: G11 or G12 Status*



## World History

The World History course is a global history course that provides a cohesive approach to learning and understanding the history of the world. In this course, students will explore history from the year 1200, focusing on the Global Tapestry, Transoceanic Connections, Revolutions, Industrialization, Empire and other Consequences of Industrialization, Global Conflict, the Cold War and Decolonization, and Globalization. This course will help students learn how to use stories about the past to orient themselves to their present moment and prepare for the future. Aside from covering key historical content that covers different regions around the world, this course will also focus on developing foundational historical thinking skills that include: Causation, Contextualization, Change and Continuity Over Time, Sourcing, and Argumentation. The World History course uses a set of overarching inquiry problems and narrative frames, situated at a variety of scales, to organize and facilitate teaching and learning. All World History students will participate in the International Affiliate of National History Day, which gives them the opportunity to showcase the skills and knowledge they have acquired and practiced throughout the course. Students will frame problems for investigation and make conjectures that guide inquiry. They will select, read, and analyze a wide range of primary and secondary sources. Students will assess sources' claims using a variety of historical thinking practices and use evidence to reason toward and communicate conclusions. The relevant disciplinary skills emphasized throughout this course prepare students far beyond the history classroom alone.

*Duration: 2 Semesters*

*Credit: 1.0 Social Studies*

*Prerequisite: Social Studies 9*

## AP Human Geography

AP Human Geography is a yearlong Advanced Placement course that culminates in a May exam designed by the College Board. The 7-unit curriculum provides a condensed overview of the work performed by modern geographers in the areas of cultural, political, urban, rural, and economic geography. Students will replicate many of the skills performed by geographical information scientists, including data analysis, source analysis, and scale analysis of contemporary examples drawn from the real world. By the end of the course, participants will be able to recognize patterns within the built environments they encounter around the world and will gain a deeper understanding of modern geopolitics. This fascinating, but blissfully less stressful AP course, is particularly suitable for students interested in pursuing degrees in economics, political science, history, or environmental science.

*Duration: 2 semester*

*Credit: 1*

*Prerequisite: None*

## AP Psychology

AP Psychology is designed as a college-level introduction to the systematic study of human behavior and mental processes. The course is designed to comply with the AP Psychology Course and Exam Description provided by the College Board. Students study the development of psychology as a scientific discipline and the various approaches to psychology. They examine in detail the research methodology used by psychologists, and they become acquainted with the subfields of psychology. Students learn about the biological bases of behavior, sensation and perception, learning and cognition, motivation, developmental psychology, testing and individual differences, treatment of abnormal behavior, and social psychology. The course culminates in



## **Social Studies**

May with the AP Psychology Exam which assesses students' understanding of course content. The exam score is used by universities to decide whether or not to give college credit.

*Duration: 2 Semesters*

*Credit: 1.0*

*Prerequisites: None*

## **AP World History Modern**

In AP World History: Modern, students investigate significant events, individuals, developments, and processes from 1200 to the present. Students develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; developing historical arguments; making historical connections; and utilizing reasoning about comparison, causation, and continuity and change over time. The course provides six themes that students explore throughout the course in order to make connections among historical developments in different times and places; humans and the environment, cultural developments and interactions, governance, economic systems, social interactions and organizations, and technology and innovation.

*Duration: 2 Semesters*

*Credit: 1.0*

*Prerequisite: G10 - G12 Status*

## **AP Comparative Government and Politics**

AP Comparative Government and Politics introduces students to politics and governments around the world. No prior knowledge of politics and government are required. Students develop skills in comparative and analytical analysis and persuasive argumentation while examining the electorates, governments, policies, interest groups, civil societies and the economic and social challenges across six specific countries: The United Kingdom, Mexico, Nigeria, China, Russia and Iran. The class also examines policies of Vietnam, the ASEAN nations and the USA. Students examine the methods of political science, political and government institutions, the composition of civil society, electoral systems and global influences. Students investigate institutions and processes in these countries and analyze and interpret data to derive general understandings. The emphasis is on big ideas and broad trends that allow comparisons, as well as current events that influence the policies and governance of these countries.

*Open to Grades 11-12*

*Duration: 2 semesters*

*Credit : 1.0*

## **AP Economics**

AP Economics is a full-year class comprising the AP Macroeconomics and AP Microeconomics courses. No prior study or knowledge of economics is required. AP Macroeconomics introduces students to the principles that apply to national economic systems as a whole and AP Microeconomics introduces students to the principles of economics that apply to individual markets and individual economic decision-makers. Students will develop skills in qualitative and quantitative analysis, accurate economic modeling and persuasive argumentation. The AP Macro component examines the components of national income and price-level determination, causes and consequences of inflation, unemployment and the effects of government economic planning. The international financial markets and the costs and benefits

of international trade are also important aspects of macro analysis. The AP Micro component develops students' knowledge of the operation of productive markets, distribution of income, market failure, and the role of government in regulating and promoting economic activity. Students learn to use graphs, charts, and data to analyze and explain economic concepts. Students sit for both the AP Macroeconomics and the AP Microeconomics exams for potential college credit.

College Course Equivalent: AP Economics is the equivalent to two semesters of a college introductory Economics. (One semester of Macroeconomics and one semester of Microeconomics)

*Open to Grades 11-12*

*Duration: 2 Semesters*

*Credit 1.0*





**FINE ARTS**



## Foundation of Art - Art I

First year high school art students are enrolled in a Basic Foundations course. This will include two-dimensional, three-dimensional, and visual literacy experiences with a focus on the elements and principals of design, with most of the emphasis placed on the Elements of Art. The student will develop and refine attitudes, knowledge, and skills through a wide range of approaches. Beyond the creation of works of art, appreciation of art at this level focuses on understanding art as a visual language. Opportunities for self-evaluation of their artistic efforts as well as opportunities to reflect on the artistic achievements of others are emphasized throughout the program. The relationship of historical and cultural contexts builds a stronger understanding of the impact of the visual world in which we live.

*Duration: 1 Semester*

*Credit: 0.5*

*Prerequisite: None*

## Intermedia Art - Art II

Second year art students are enrolled in an advanced art course that provides them with an expanded range of art media, art history, and processes. This will include two-dimensional and three-dimensional projects, and visual literacy experiences with a focus on the principals of design. The student will develop a concrete understanding of how artists use the Principals of Design as a foundation in producing their works of art. Beyond the creation of works of art, appreciation of art at this level focuses on the impressionism/post impressionism, pop art periods, and minority cultures. Students will continue to advance their skills by engaging in self-evaluation of their artistic efforts as well as having opportunities to reflect on the artistic achievements of the masters and their peers throughout the program.

*Duration: 1 Semester*

*Credit: 0.5*

*Prerequisite: Completion a full year of Art I*

## Advance Art - Art III

Third year art students are enrolled in an advanced art course which prepares them for possible enrollment in an Advanced Placement art class their twelfth-grade year. The course provides students with an opportunity to expand on their studio skills, assembling work for a portfolio, inquiry-based art making, understanding art as a process, as well as an introduction to different art periods and movements. The student will develop a concrete understanding of how artists use a sketchbook for research, journaling, studies, and reflection. The methodology of this course prepares the student for the AP curricular framework where they begin to use their studio knowledge and move their art making into conceptual art. As in the intermediate art course students will continue to advance their skills by engaging in self-evaluation of their artistic efforts as well as having opportunities to reflect on the artistic achievements of the masters and their peers throughout the program.

*Duration: 1 Semester*

*Credit: 0.5*

*Prerequisite: Completion a full year of Art 2*

## HS Choir

High School Choir is open to all students; no prior experience or audition is necessary. Choir students will work collaboratively to learn music which splits into 3-8 parts. Vocal



## **Fine Art**

training during class allows students to hone skills, increase in confidence, and work towards musical independence. Students will participate in regular rhythm reading and sight singing activities using solfege with “moveable do” as a strategy for learning. Music from a variety of composers, time periods, styles, cultures, and languages will be explored. Music theory, music literacy, and music history are embedded in instruction to provide deeper understanding of contextual elements and composer’s intent. This is a performance-based ensemble, where students will perform in at least one major concert each semester. Performances take place in the evening and perhaps on weekends, and are required for choir members. Concert attire is tailor-made, and costs are covered by the student. HS Choir members are eligible to audition for the AMIS International Honor Choir, which will be in Taipei in March. If selected to participate, the student is responsible for all travel costs.

*Duration: 1 Semester*

*Credit: 0.5*

*Prerequisite: None*

## **Ensemble**

High School Chamber Ensemble is open to instrumental musicians who are able to read music and play a concert band or orchestra instrument proficiently. This class meets after school on Wednesdays, from 3-5pm. Through individual tutoring, instrument sectionals, master classes, and collaborative ensemble rehearsals, students will gain knowledge, experience, and increased confidence in individual and group performance. A variety of composers, genres, time periods, and instrument combinations will be explored. Topics of study also include ear training, music theory, and music history. This is a performance-based ensemble, where students will perform in at least one major concert each semester. Performances take place in the evening and perhaps on weekends, and are required for Chamber Ensemble members. Concert attire is tailor-made, and costs are covered by the student.

*Duration: 1 Semester*

*Credit: 0.25*

*Grade: Pass/Fail*



# MODERN LANGUAGE



## **Modern Languages**

### **English as an Additional Language**

English as an Additional Language (EAL) (Grades 9,10,11 & 12) helps the student gain academic literacy and speaking proficiencies in the English language that will enable him/her to fully understand the content areas of high school. Students focus on building vocabulary, growing understanding in grammar, gaining confidence with speaking skills, and practicing English academic reading and writing skills at grade level.

*Duration: 2 Semesters*

### **HS Mandarin Novice**

The High School Mandarin Novice course is designed for students with little to no prior experience in the language. Through engaging activities, interactive learning, and cultural exploration, students will build a solid foundation in Mandarin Chinese. Emphasis will be placed on basic communication skills, essential vocabulary acquisition, refining pronunciation, grasping fundamental grammatical structures, and an introduction to Chinese characters. This foundational knowledge equips students to engage in effective Mandarin communication across a limited range of everyday topics. Students will steadily cultivate the oral proficiency and confidence needed to initiate simple and meaningful conversations by engaging in interactive in-class activities and purposeful assignments.

### **HS Mandarin Intermediate Low**

The High School Mandarin Intermediate Low course is designed for high school students with a limited foundation in Mandarin. This course seamlessly builds upon the groundwork laid in the previous level, introducing new Chinese vocabulary and grammar while further refining students' listening, speaking, reading, and writing skills. Emphasis is placed on developing students' abilities to engage in straightforward, practical conversations on everyday topics. The course aims to elevate proficiency in reading and writing, fostering improved Chinese expressions and the competence to construct short essays. Structured around various units to ensure a comprehensive exploration of language skills. Beyond language acquisition, the course introduces students to captivating facets of Chinese culture through multimedia presentations and interactive activities.

### **HS Mandarin Intermediate Mid**

The High School Mandarin Intermediate Mid course is designed for High School students with a foundational understanding of Mandarin, this course aims to refine listening, speaking, reading, and writing skills essential for daily life. The focus is on cultivating the ability to comprehend sentence-length speech in various personal and social contexts, express personal thoughts through constructed language, and tackle short, information-rich topics. Students will further develop their writing skills, crafting short, purposeful communications and compositions to address practical writing needs. Throughout the curriculum, students will adeptly handle uncomplicated communicative tasks in straightforward social scenarios. The course also introduces cultural perspectives through immersive experiences, including the exploration of Chinese Traditional festivals, the art of Chinese culinary creations, the elegance of Chinese calligraphy, and more.

### **HS Mandarin Intermediate Mid 2**

The High School Mandarin Intermediate Mid 2 course is designed for students with moderate background and skills in the Chinese Language. Students study at this



level to prepare for the AP Chinese exam or progress to the next level. This course will provide students the opportunity to experience unfamiliar vocabulary, texts, and dialogues, to build a lexicon in spoken and written forms, and to use context and strategies to ascertain meaning without knowing the structures and lexicon within an authentic text. Based on a diagnostic pre-test, students work diligently to improve all four language skills. The topics we have studied include an introduction to the structure of and strategies for the AP exam, grammar for higher-level speaking and writing, strategies for reading, and the culture of China.

## **AP Chinese Language and Culture**

The AP Chinese Language and Culture course is designed for high school students who have successfully completed at least three years of Chinese courses. The course serves as both a Chinese language course as well as an introduction to the interdisciplinary field of Chinese culture. Through the course, students will further develop their communication skills and cultural competence. The primary focus is to provide students with the opportunity to experience a variety of themes in daily life, Chinese history, sociology, national and international issues, etc. This will deepen the students' immersion into the language and culture of the Chinese-speaking world and challenge the students to use language as a means to study different disciplines and topics, rather than just the language itself. The goal of this course is that, by the end of the school year, students are expected to perform at the intermediate range across the three communication modes; interpretive, interpersonal, and presentation as described in the ACTFL Performance Descriptors for Language Learners.

*Duration: 2 Semesters*

*Credit: 1.0*

*Prerequisite: Successful completion of Mandarin Intermediate High and teacher recommendation*

## **High School Spanish Language**

High school Spanish Language program offer a diverse range of classes, spanning from introductory levels to Advanced Placement, as well as content-based and project-based courses. The primary goals of these programs are to: a) cultivate language and intercultural competencies, essential for success in pluricultural environments and global economies; and b) fulfill the Concordia 2-year languages requirement, preparing learners for college-level language classes. Each course focuses on the three modes of communication— Interpersonal (speaking), Interpretive (reading, listening), and Presentational (writing) —assessed at different proficiency levels.

## **Spanish Novice**

Designed for high school students with minimal or no previous Spanish knowledge. Emphasis is on applying simple grammatical structures within familiar everyday contexts. Students interact with authentic materials, encouraging the use of the target language to reinforce vocabulary and improve fluency. Completion of this course enables students to communicate at a Novice High Level, as defined by ACTFL curriculum.

## **Spanish Intermediate**

Open to students who have completed Spanish Novice or demonstrate proficiency through a placement test. This course builds on previous skills, advancing from word-level understanding to full sentence construction within diverse time frames (present to preterit tenses). Cultural awareness is developed through comparisons between Hispanic countries and hometowns. Completion of this course results in students



## **Health and Wellness**

communicating at an Intermediate Low Level, following the ACTFL curriculum.

### **Spanish Intermediate Mid**

For students who have completed Spanish Intermediate or demonstrate proficiency through a placement test. This course emphasizes describing and narrating events using appropriate time frames to enhance fluency and accuracy. Communication in both familiar and unfamiliar contexts is expected, with an emphasis on giving opinions and advice about products or places. Completion of this course enables students to communicate at an Intermediate Mid-Level, as defined by ACTFL curriculum.

### **Spanish Intermediate High**

Open to students who have completed Spanish Intermediate Mid or demonstrate proficiency through a placement test. This course consolidates advanced grammar, stressing the three modes of communication at the Advanced Low Level, as defined by ACTFL. Students communicate primarily in Spanish, tackling abstract topics, supporting opinions with diverse time frames, and analyzing authentic materials in oral and written essays. Strong appreciation for and knowledge of Hispanic culture are fostered in this course.

*Credit: 1.0 Modern Language*

*Prerequisite: Completion of the previous level of Spanish*

### **AP Spanish Language and Culture**

For students who have successfully completed Spanish Intermediate High or demonstrate proficiency through a placement test. Aligned with the College Board's Advanced Placement curriculum, this course is conducted exclusively in Spanish. It covers unit themes guided by the College Board, exploring language, culture, and history related with Families and Communities; Science and Technology; Beauty and Aesthetics; Contemporary Life, Global Challenges, and Personal and Public Identities. Successful completion substantiates as an approved university-level class.

*Duration: 2 Semesters*

*Credit: 1.0*

*Prerequisite: Successful completion of Spanish Intermediate High*





# HEALTH & WELLNESS







## **Health and Wellness**

### **Health and Wellness Physical Education**

The Physical Education program focuses on personal fitness and is largely designed around the Presidential Youth Fitness Program. The standard PE class is a split block shared with the corresponding seminar class. The graduation requirement is that each student participates in the PE program while they are a student at Concordia Hanoi.

*Duration: 2 Semesters*

*Credit: 0.5 Wellness credit*

*\*Participation is a graduation requirement*

### **Health and Wellness Freshman Seminar**

Seminar 9 is a year-long course that integrates Social and Emotional Learning (SEL) content with career exploration and development lessons. The SEL component aims to cultivate relationship skills, enhance social awareness, nurture self-awareness, develop self-management, and promote responsible decision-making. In Freshman Seminar classes, students embark on a journey of self-discovery, exploring how their academic and personal interests, passions, strengths, and values shape their potential career choices.

Utilizing the online Maia learning portal and other educational resources, students delve into various concepts. These include the development of time management skills, study habits, goal-setting, responsible online behavior, drug and alcohol education, sexual health, and mental and emotional wellness.

*Duration: 2 Semesters*

*Credit: 0.5 Wellness credit*

*\*Participation is a graduation requirement*

### **Health and Wellness Sophomore Seminar**

Seminar 10 is a comprehensive year-long course that integrates both Social and Emotional Learning (SEL) content and career exploration and development lessons. The SEL focus aims to enhance relationship skills, elevate social awareness, nurture self-awareness, instill self-management, and cultivate responsible decision-making skills.

In Sophomore Seminar classes, students engage in thorough career-related assessments and tests, covering topics such as personality, work values, interests, personal and professional skills, and strengths. Collaborating closely with their counselor, the information gleaned from these assessments, combined with other academic and personal details, is used to triangulate relevant data, aiding in the process of narrowing down potential career fields and future university choices.

The online Maia learning portal and other educational resources form the foundation for exploring concepts such as developing time management skills, study habits, goal-setting, maintaining healthy online practices, understanding drug and alcohol education, promoting sexual health, and ensuring mental and emotional well-being.

*Duration: 2 Semesters*

*Credit: 0.5 Wellness credit*

*\*Participation is a graduation requirement*

### **Health and Wellness Junior Seminar**

Seminar 11 is a full year course designed to help students employ strategies to achieve future educational and career goals. Students will explore the relationship between



personal qualities, education, training, and the world of work. As part of this exploration, students will also begin their research and preparation for the impending university application process, the development of their summer plans. At the end of the semester, students will be prepared to lead their end of the year Junior Meeting with their parents and their counselor. Health and Wellness topics will include sexual education and drug and alcohol awareness.

*Duration: 2 Semesters*

*Credit: 0.5 Wellness credit*

*\*Participation is a graduation requirement*

## **Health and Wellness Senior Seminar**

Seminar 12 is a full year course designed to help students effectively prepare for a successful transition to university. As part of this process, students will work intensively with their counselor on successfully completing their college application process. Health and wellness topics related to this transition will include drug and alcohol awareness, sexual education, and an in-depth exploration of key factors in cross-cultural university transitions. Students will develop personal competency in applying intercultural transitional strategies, as well as an awareness of how their family culture and personal history has impacted the development of their own cultural identity.

*Duration: 2 Semesters*

*Credit: 0.5 Wellness credit*

*\*Participation is a graduation requirement*