Concordia
INTERNATIONAL SCHOOL SHANGHAI
上海协和国际外籍人员子女学校

High School Course Selection Guide 2025-2026

High School Course Guide SY 25-26

Concordia HS is proud to offer many excellent courses for students to pursue their passions! Please take the time to read about our varied offerings in each department for SY 24-25.

Kindly keep the following in mind:

- Each year, students are required to take seven courses and may request an eighth class through their counselor.
- Some of our classes, especially APs and Applied Learning options, may reach their maximum number and need to be capped. Should this occur seniors would be given priority, then juniors, then sophomores, then freshmen. Beyond that, a lottery system will be used.
- Some courses may not reach the minimum number of students to run as a course. These classes will be removed from the schedule and students will meet with their counselors to determine other options.
- Some courses will be on a two-year rotation. These courses are noted below and will be offered one year, but not the next year.

AP Courses per Grade Level

- Students may take the following number of AP Courses per grade:
  - Grade 9 – 1
  - Grade 10 – 1
  - Grade 11 – 3
  - Grade 12 – 4

Students may request to take one additional AP Course beyond the allotted number per grade level. They must first speak with their counselor to begin this Course Exception process. They will be required to confirm the course recommendation from the teacher and receive approval before registration.

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

- 4 credits of English (participation required each year)
- 3 credits of Social Science
- 3 credits of Science
- 3 credits of Math
- 2 credits of World Language (credits must be consecutive and of the same language)
- 2 credits of Fine Arts
- 0.5 credits of Health
- 2 credits of Physical Education
- 2 credits of Spirituality (participation required each year)

Students are expected to take eight full semesters of classes, choosing additional courses of interest beyond graduation requirements to round out their schedules each year.

Please review the following course notations for additional information about the course offerings:

(#) - Courses marked with a hashtag are offered but will only run if a sufficient number of students register for the course.

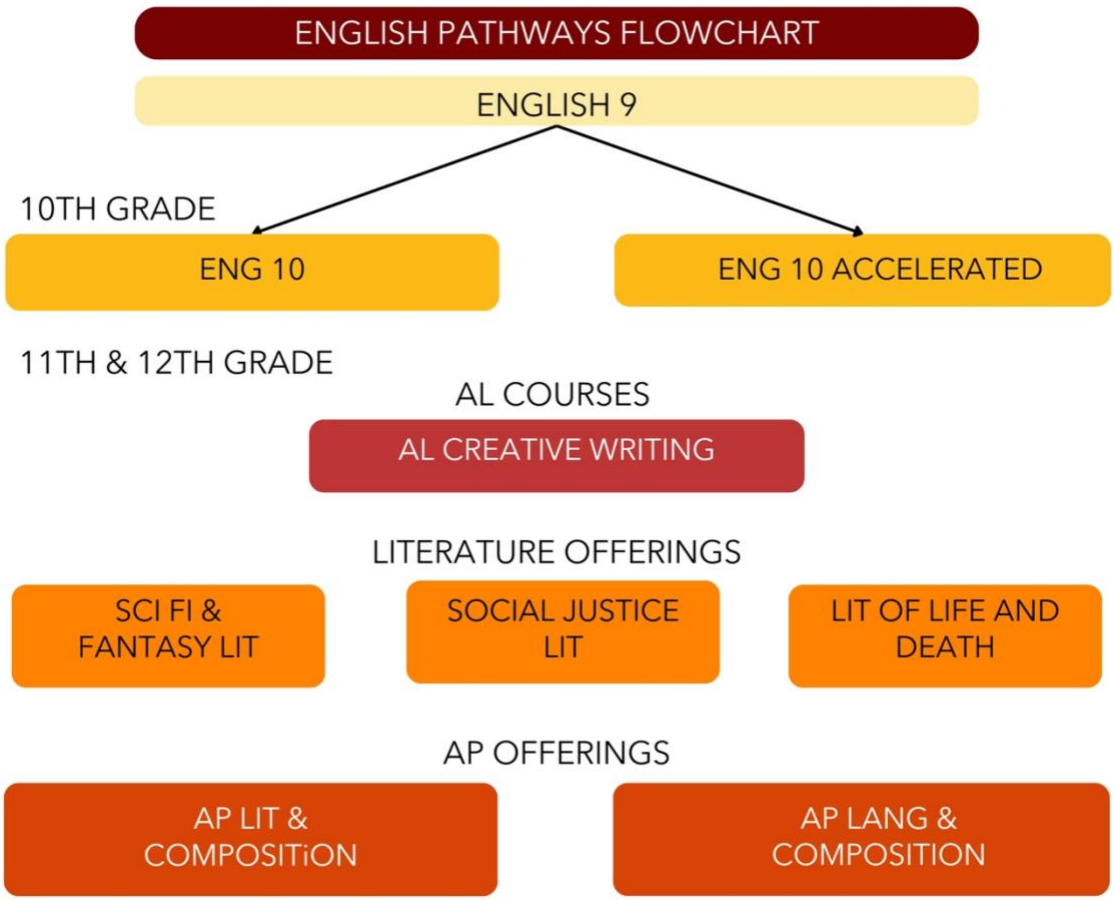
(*) - Courses marked with an asterisk will run every other year. These courses will be offered opposite another course in the same subject area.

(@) - Courses noted with an at sign will run on a rotation basis. 2 of 3 courses will be offered each year from this subject area and will be listed at the time of Course Selection on PowerSchool.

ENGLISH

Through an analysis of literature, Concordia students develop critical reading and thinking skills, an appreciation for the power of words and an increased knowledge of themselves in relation to world cultures. Additionally, students learn to comprehensively engage essential communication skills, technological skills, learning skills and research skills and continually grow in their ability to express themselves more precisely in their oral and written work.
Four credits in English are required for graduation.

G9-12 ENGLISH PATHWAYS FLOWCHART



English 9: Foundation, Agility, and Identity

Prerequisites: None

Duration: 2 Semesters Credit: 1.0

English 9 is a course that seeks to foster a love of reading, writing, and the English language. Throughout the year, students will be exposed to a range of literary genres including novels, plays, short stories, poetry, and nonfiction texts. Additionally, this course will provide consistent opportunities for developing the writer's voice and strengthening sound writing techniques. Students will experience various modes of writing including creative, expository, narrative, literary, and persuasive. 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 in reflective journaling and the chance to explore the inner self. English 9 aims to not only instill a passion for all things literary, but also encourage students to become more conscientious and purpose-driven global citizens.

English 10: Struggle, Voice, and Expression

Prerequisites: One year of English

Duration: 2 Semesters Credit: 1.0

In order to become a thoughtful, productive citizen in the 21st century, an individual must think critically, read widely with comprehension, and write from a perspective of strength, truth, and conviction. The purpose of English 10 is to study the techniques that make literature a powerful art form, while practicing the reading, writing, speaking, and listening skills that make humans more capable thinkers and communicators. Another important goal is for students to strengthen their analytical skills through the close study of selected works of prose and poetry—representing different genres and various periods of literary history. This class is designed to promote academic excellence in English language arts through enriching experiences in literary analysis, vocabulary development, grammar usage, and written and oral communication.

Accelerated English 10: Struggle, Voice, and Expression

Prerequisites: One year of English and teacher recommendation

Duration: 2 Semesters Credit: 1.0

In addition to becoming a more thoughtful, productive citizen in the 21st century, an individual must think critically, read widely with comprehension, and write from a balanced perspective that draws upon research and analysis. The purpose of Accelerated English 10 is not only to refine techniques in reading, writing, speaking, and listening but also to apply critical strategies in the organization and delivery of credible, persuasive information. Thus, an essential element in this course is the expansion of literary topics and themes embedded within each literary work. The course also aims to foster an appreciation of diverse cultures and traditions through the study of world literature. Due to increased rigor in reading and writing, students will target rhetorical appeals and critical lenses to compose a variety of essay types. Ultimately, this Accelerated course develops essential prerequisite skills for the

AP Language and Literature courses and promotes academic excellence in English language arts.

Science Fiction Literature

Prerequisites: Two years of English

Duration: 2 Semesters Credit: 1.0

Science Fiction Literature engages with the reading of science fiction works across genres, where imaginary beings and worlds are created in order to critique and reflect human society, human behavior, and human development. Students will read works that ask the "what if '' questions in order to develop their understanding of possible futures as a species. While students evaluate different human perspectives, experiences, ideas, and depictions of the world, they will consider their own individual and collective agency as global citizens. The purpose of this course is to hone essential skills in reading, writing, listening, speaking, and research in order to further prepare students for college and life.

Social Justice Literature

Prerequisites: Two years of English

Duration: 2 Semesters Credit: 1.0

Social Justice Literature is designed to not only help students navigate their understanding of our complex world but also encourage an authentic response to the complex human issues of our day. Themes of social justice, equity, identity, gender, classism, and racism are among the many motifs students will explore via various literary genres, including both fiction and nonfiction. While students evaluate different human perspectives, experiences, ideas, and depictions of the world, they will consider their own individual and collective agency as global citizens. The purpose of this course is to hone essential skills in reading, writing, listening, speaking, and research in order to further prepare students for college and life.

Literature of Life and Death

Prerequisites: Two years of English

Duration: 2 Semesters Credit: 1.0

Literature of Life and Death explores literature across genres around themes relating to life and death and what it means to be human in between: identity, culture, love, grief, values, conflict, perspectives, and belief. While students evaluate memoir, poetry, graphic novels, drama, and novels, they will reflect on the trajectory and shape of their own lives and how they intersect with others, in order to develop their own vision for how to live a good life. While students evaluate different human perspectives, experiences, ideas, and depictions of the world, they will consider their own individual and collective agency as global citizens.

The purpose of this course is to hone essential skills in reading, writing, listening, speaking, and research in order to further prepare students for college and life.

Literature in Translation

Prerequisites: Two years of English

Duration: 2 Semesters Credit: 1.0

Literature in Translation explores a range of exemplary literary works in various genres translated into English from Asian, European, and Middle Eastern languages. It examines how the practice of literary analysis is related to language and culture by analyzing the texts in the context of translation theory, national literatures, and different cultural and narrative traditions. While students evaluate different human perspectives, experiences, ideas, and depictions of the world, they will consider their own individual and collective agency as global citizens. The purpose of this course is to hone essential skills in reading, writing, listening, speaking, and research in order to further prepare students for college and life.

AL Creative Writing and the Writer 's Craft

Prerequisites: Two years of English and teacher recommendation

Duration: 2 Semesters Credit: 1.0

AL Creative Writing and the Writer's Craft is a study of the craft of poetry, fiction, creative nonfiction and children's literature, where students will engage in deep analysis of the writer's craft and generate their own comprehensive body of work to share with various real world audiences. The focus is on experimentation, risk-taking, and creation, on writing in community (workshop/feedback/editing) and on publication/presentation. Students will also engage in an in depth Author Study reading deeply of a single author's work. Final projects include public reading, research projects, and publication.

AP Language and Composition

Prerequisites: Two years of English and teacher recommendation

Duration: 2 Semesters Credit: 1.0

The AP English Language and Composition course aligns to an introductory college-level rhetoric and writing curriculum. The AP English Language and Composition course focuses on the development and revision of evidence-based analytic and argumentative writing, the rhetorical analysis of nonfiction texts, and the decisions writers make as they compose and revise. Students evaluate, synthesize, and cite research to support their arguments. Additionally, they read and analyze rhetorical elements and their effects in nonfiction texts—including images as forms of text— from a range of disciplines and historical periods. In addition to written assessments, students

will engage in collaborative discussions and presentations to hone their oral communication skills.

AP Literature and Composition

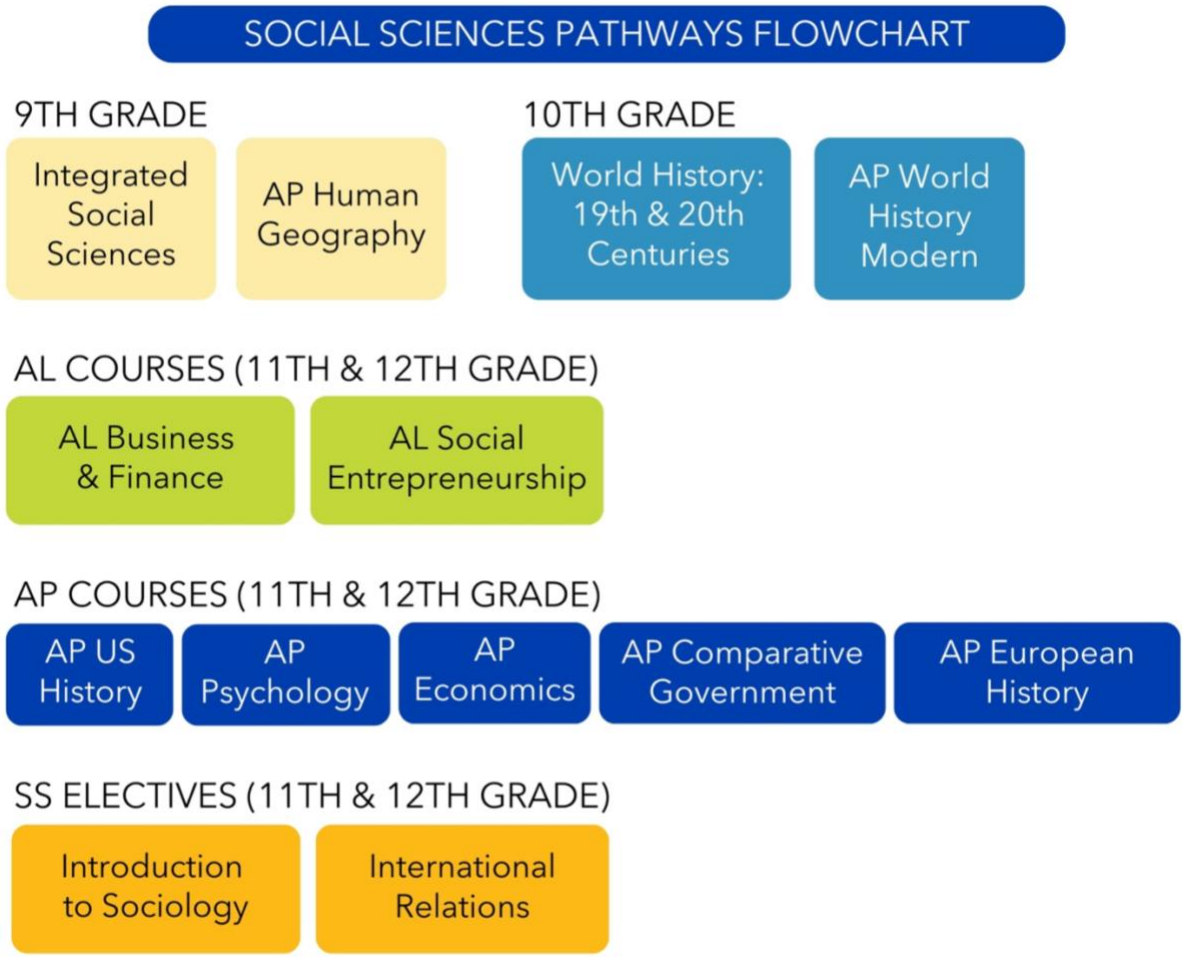
Prerequisites: Two years of English and teacher recommendation
Duration: 2 Semesters Credit: 1.0

The AP English Literature and Composition course aligns to an introductory college-level literature and writing curriculum. The AP English Literature and Composition course focuses on reading, analyzing, and writing about imaginative literature (fiction, poetry, drama) from various periods. Students engage in close reading and critical analysis of imaginative literature to deepen their understanding of the ways writers use language to provide both meaning and pleasure. As they read, students consider a work's structure, style, and themes, as well as its use of figurative language, imagery, and symbolism. Writing assignments include expository, analytical, and argumentative essays that require students to analyze and interpret literary works. In addition to written assessments, students will engage in collaborative discussions and presentations to hone their oral communication skills.

SOCIAL SCIENCES

Study of the diverse social sciences courses available at Concordia helps shape our students to become creative, aware people—people who are capable of making reflective decisions and of participating successfully in the civil life of their communities, nation and the world. We take an integrated, interdisciplinary, global and conceptual approach to the social sciences to achieve these ends and also meet the needs of American studies for our American students or for students intending to study in the States through a study of American history. Three credits in social science are required for graduation.

G9-12 SOCIAL SCIENCES PATHWAYS FLOWCHART



Integrated Social Sciences

Prerequisites: None

Duration: 2 Semesters Credit: 1.0

This foundational social studies course for 9th grade integrates multiple social science disciplines through a historical lens, employing a thematic approach to explore the development of human societies. With units spanning inquiry and research methods, the evolution of governance, the influence of ethics and belief systems, trade and cultural exchanges, intellectual advancements, and the impacts of early globalization, students will analyze key historical periods from 600 BCE to 1700 CE. Using critical thinking, research-based inquiry, and diverse assessment strategies like source analysis, discussions, and argumentative writing, the course fosters a comprehensive understanding of social structures, cultural dynamics, and human progress across different eras and regions.

World History: 19th & 20th Century

Prerequisites: One year of social sciences

Duration: 2 Semesters Credit: 1.0

The Grade 10 World History course covers major historical developments and processes that took place during the 19th and 20th Centuries. In order to facilitate the learning and understanding of historical developments and processes during these two centuries, students will be introduced to the history of Shanghai and China as a central case study that is weaved into all units of the course. 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, document/source analysis & argumentation. All Grade 10 World History students will participate in National History Day China which gives them the opportunity to showcase the skills and knowledge they have acquired and practiced throughout the course of the year.

Introduction to Sociology

Prerequisites: Two years of social sciences

Duration: 2 Semesters Credit: 1.0

Introduction to Sociology is a year-long, systematic exploration of contemporary global society in which students will explore the realms of social organization, social institutions and social change. In this course, students will apply scientific methodology to the study of family, religion, education, government and media. Students will examine class, gender and race-based inequality, deviance and conformity and a variety of emerging trends in demography, urbanization, environmentalism and more.

International Relations/ Peace and Conflict Studies

Prerequisites: Two years of social sciences

Duration: 2 Semesters Credit: 1.0

IR/PCS is an interdisciplinary course that focuses on the social, political, and economic issues that have shaped the contours of the modern geopolitical landscape. Students will learn

about the structure and function of the modern state system and will study the historical landmarks of its evolution, from the Treaty of Westphalia to 9/11. Major topics in this course include globalization and its impact, international law and human rights, power and statecraft, poverty and inequality, security policy, terrorism, and the growth of transnational environmental movements. Beyond this, students will be challenged to cultivate an ethic of stewardship toward the global commons, to see themselves both as agents of change and as members of a global community and to work together to posit thoughtful and creative solutions to the global challenges of the 21st century.

AL Social Entrepreneurship

Prerequisites: Two years of social sciences and teacher recommendation

Duration: 2 Semesters Credit: 1.0

Social entrepreneurship is an emerging field that lies at the intersection of business and social change. A social entrepreneur uses skills and strategies within the business world to innovatively and sustainably solve social, environmental, and economic problems. In this course all of the work is active and you will learn by doing as you solve real problems. The majority of the work you will do in this course is collaborative and team based. Throughout the course you will develop a set of skills and tools that you will apply to our own social enterprise, Third Culture Coffee Roasters. Your curiosity and sense of urgency will drive the curriculum. After completing this course, I hope that you will be an agent for change, no matter where you go after you leave Concordia.

AL Business & Finance

Prerequisites: Two years of social sciences and teacher recommendation

Duration: 2 Semesters Credit: 1.0

Advancing in today's competitive and continually changing environment requires business insight. This course equips students with the fundamental principles that allow them to navigate the business and financial landscape of a global economy. Students are introduced to key business principles through hands-on activities, and by applying these principles to business case studies and real-world simulations. Major areas of study include business psychology, marketing, finance, management, business entrepreneurship, and capital markets. Course activities include, but are not limited to, having students create, manage, and market products and services of their own design, and building an investment portfolio.

AP Human Geography

Prerequisites: GPA Qualification and 8th Grade Humanities and teacher recommendation

Duration: 2 Semesters Credit: 1.0

The AP Human Geography course is equivalent to an introductory college-level course in human geography. The course introduces students to the systematic study of patterns and processes that have shaped human understanding, use and alteration of Earth's surface.

Students employ spatial concepts and landscape analysis to examine socioeconomic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications. Content is presented thematically and is organized around: economic geography, cultural geography, political geography and urban geography. The approach is problem-centered around case studies drawn from all world regions, with an emphasis on understanding the world in which we live today.

AP European History (*)

Prerequisites: Two years of social sciences and teacher recommendation
Duration: 2 Semesters Credit: 1.0
In AP European History, students investigate significant events, individuals, developments, and processes from approximately 1450 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 also provides seven themes that students explore throughout the course in order to make connections among historical developments in different times and places: interaction of Europe and the world, economic and commercial development, cultural and intellectual development, states and other institutions of power, social organization and development, national and European identity, and technological and scientific innovations.

AP World History: Modern (*)

Prerequisites: One year of social sciences and teacher recommendation
Duration: 2 Semesters Credit: 1.0
The purpose of the AP World History course is to develop greater understanding of the evolution
of global processes and contacts, in interaction with different types of human societies. This understanding is advanced through a combination of selective factual knowledge and appropriate analytical skills. The course highlights the nature of changes in international frameworks and their causes and consequences, as well as comparisons among major societies. Please note: For entry in Grade 10, the student must have demonstrated superior command of critical reading analysis and English proficiency along with an appropriate level of scholarship in prior courses. All AP World History students will participate in National History Day China.

AP Economics

Prerequisites: Two years of social sciences
Duration: 2 Semesters Credit: 1.0
The AP Economics Course divides equally into a semester of microeconomics and a semester of macroeconomics. In the first semester, our survey of microeconomics covers basic principles including scarcity, opportunity cost, comparative advantage and the nature and function of a capitalist economic system. Building on this foundation, the course then moves to more complex analysis of how households, firms and nations make decisions regarding the allocation of resources, and how an economy answers three fundamental questions: what to produce, how to produce and for whom to produce. Students will learn about a variety of

real-world economic issues, including poverty and inequality, externalities and other market failures, and about the role of government in regulating economic activity. The second semester sees our attention shift to Macroeconomics, the study of how entire economies function on a national or international scale. Topics in this semester include GDP and economic growth, inflation and unemployment, interest rates, financial markets, international trade and capital flows.

AP Psychology

Prerequisites: Two years of social sciences and teacher recommendation

Duration: 2 Semesters Credit: 1.0

Advanced Placement Psychology is intended to represent college-level psychology studies and can earn students college credit. The course is designed to comply with the curricular requirements contained in the AP Psychology Course Description. This course introduces students to the systematic and scientific study of human behavior and mental processes—as well as the various approaches to psychology. The research methodology used by psychologists is examined in detail as are the subfields of psychology. The course culminates in the second semester with the AP Psychology Exam, which tests students' understanding of ideas that unite major areas of psychological history, study and research.

AP Comparative Government

Prerequisites: Two years of social sciences and teacher recommendation

Duration: 2 Semesters Credit: 1.0

The AP course in Comparative Government and Politics introduces students to fundamental concepts used by political scientists to study the processes and outcomes of politics in a variety of country settings. The course aims to illustrate the rich diversity of political life, to show available institutional alternatives, to explain differences in processes and policy outcomes and to communicate to students the importance of global political and economic changes. Careful comparison of political systems produces useful knowledge about the institutions and policies countries have employed to address problems, or, indeed, what they have done to make things worse. Through comparison we will examine questions such as: Why are some countries stable democracies and not others? Why do many democracies have prime ministers instead of presidents? In addition to covering the major concepts that are used to organize and interpret what we know about political phenomena and relationships, the course will cover specific countries and their governments. Six countries form the core of the AP Comparative Government and Politics course: China, Great Britain, Iran, Mexico, Nigeria and Russia. The course also examines supranational organizations like the European Union.

AP US History

Prerequisites: Two years of social sciences and teacher recommendation

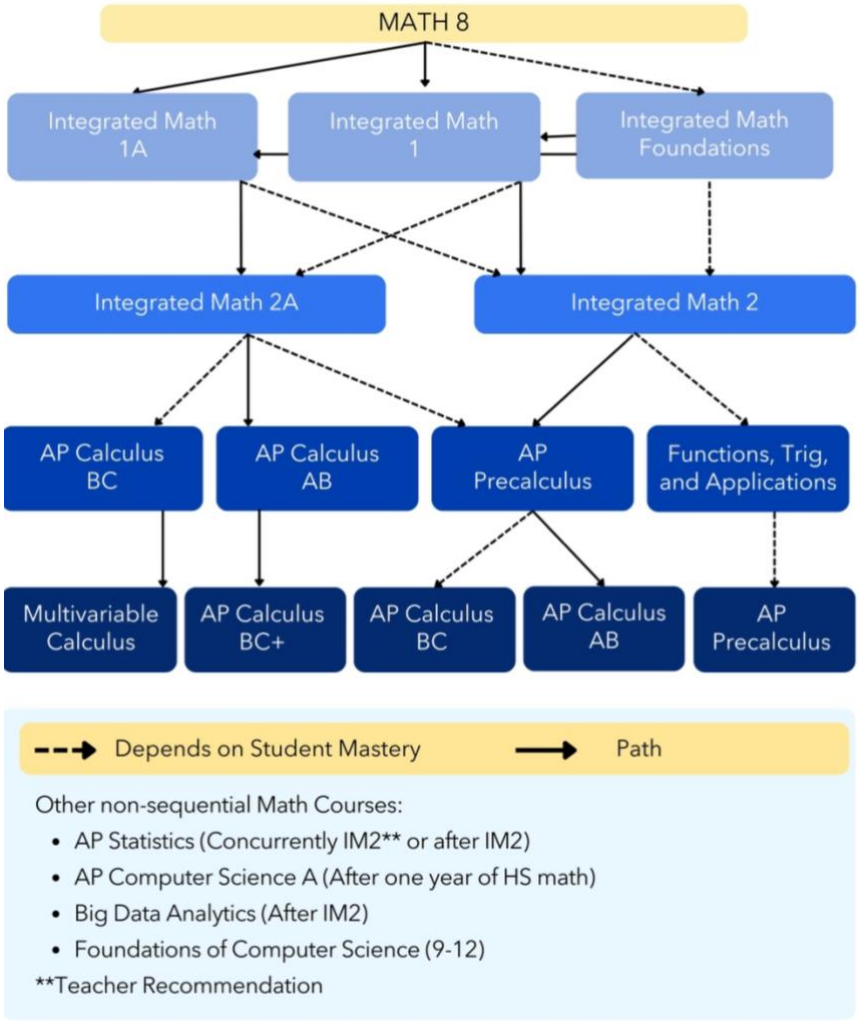
Duration: 2 Semesters Credit: 1.0

The AP course in United States History is designed to provide students with the analytic skills and factual knowledge necessary to deal critically with the problems and materials in United States history. The course prepares students for intermediate and advanced college courses by making demands upon them equivalent to those made by full-year introductory college courses. Students should learn to assess historical materials–their relevance to a given interpretive problem, their reliability and their importance–and to weigh the evidence and interpretations presented in historical scholarship. An AP United States History course should thus develop the skills necessary to arrive at conclusions on the basis of an informed judgment and to present reasons and evidence clearly and persuasively in essay format.

MATHEMATICS

Concordia provides the opportunity for all students to develop mathematical thinking and to be conversant in the language of mathematics. We believe that the mastery of fundamentals builds a solid foundation and is a critical springboard for advanced learning. Through our sequential course offerings, Concordia students build confidence and self-esteem as they begin to own their math skills and learn to tackle increasingly complex concepts. This discipline is more than just a collection of skills and concepts to be mastered; today's mathematically literate students must be able to explore, analyze, conjecture and reason logically as well. Students learn these abilities at Concordia and develop strategies for learning and using mathematics with confidence in a continually changing world.
Three credits in mathematics are required for graduation.

G9-12 MATH PATHWAYS FLOWCHART



Integrated Math Foundations

Prerequisites: Math 8

Duration 2 Semesters Credit 1.0

This course is designed to equip students with the foundational mathematical skills and conceptual understanding needed to succeed in the Integrated Math program. Emphasizing the foundational principles of algebra, geometry, and problem-solving, this course strengthens students' numerical fluency, logical reasoning, and critical thinking. This course prepares students for Integrated Math 1.

Integrated Math 1

Prerequisites: Math 8 or Integrated Math Foundations

Duration: 2 Semesters Credit: 1.0

The Integrated Math program is a two-year course designed to provide students with a comprehensive and interconnected understanding of math concepts and skills. The program is offered in both a regular track and an accelerated track, and it typically takes place during 9th and 10th grade. There is a heavy component in developing the Algebraic skills needed in higher-level mathematics. Students in this track will have a solid math foundation that will prepare them for AP Precalculus and Calculus AB/BC.

Integrated Math 1 - Accelerated

Prerequisites: Math 8 or Integrated Math Foundations and teacher recommendation

Duration: 2 Semesters Credit: 1.0

The Accelerated Integrated Math program is an intensive, fast-paced two-year course designed to equip students with a comprehensive and interconnected mastery of math concepts and skills in a condensed timeframe. A strong emphasis is placed on developing the necessary advanced Algebraic skills for advanced mathematics.

Students who successfully complete the Accelerated Integrated Math 1 program will possess a robust math foundation. This course prepares them for Integrated Math 2 Accelerated path which leads into Calculus AB or BC and potentially Multivariable Calculus/Linear Algebra in their senior year. This program demands high levels of dedication and commitment from students to excel in their mathematical pursuits. The Integrated Math 1 Accelerated is for those students who are headed to Multivariable Calculus and Linear Algebra in their senior year.

Integrated Math 2

Prerequisites: IM1or IM1 Accelerated

Duration: 2 Semesters Credit: 1.0

The Integrated Math program is a two-year course designed to provide students with a comprehensive and interconnected understanding of math concepts and skills. The program is offered in both a regular track and an accelerated track, and it typically takes place during 9th and 10th grade. There is a heavy component in developing the Algebraic skills needed in

higher-level mathematics. Students in this track will have a solid math foundation that will prepare them for AP Precalculus and Calculus AB/BC.

Integrated Math 2 - Accelerated

Prerequisites: IM 1accelerated or IM1 and teacher recommendation

Duration: 2 Semesters Credit: 1.0

The Accelerated Integrated Math program is an intensive, fast-paced two-year course designed to equip students with a comprehensive and interconnected mastery of math concepts and skills in a condensed timeframe. A strong emphasis is placed on developing the necessary advanced Algebraic skills for advanced mathematics.

This course prepares them for a path which leads into Calculus AB or BC and potentially Multivariable Calculus/Linear Algebra in their senior year. This program demands high levels of dedication and commitment from students to excel in their mathematical pursuits. Integrated Math 2 Accelerated is for those students who are headed to Multivariable Calculus and Linear Algebra in their senior year.

Foundations of Computer Science

Prerequisites: None

Duration: 2 Semesters Credit: 1.0

This engaging course provides an accessible introduction to programming and computer science, ideal for students with minimal or no programming experience. Focused on Python, a popular and versatile programming language, the course introduces computational problem-solving through a series of captivating and progressively challenging problems. Beginning with fundamental concepts like creating drawings and understanding colors, students will advance to more complex topics, including conditionals, loops, and data structures.

Designed to cater to both beginners and those with some basic skills, the course emphasizes practical application, enabling students to apply theoretical concepts creatively and effectively. It not only equips students with essential Python programming skills but also fosters collaborative problem-solving. By the end of the course, students will have a solid foundation in Python and be prepared for future challenges in the digital world, setting the stage for further educational pursuits or diverse real-world applications.

Functions, Trigonometry and Statistics

Prerequisites: IM 2 and teacher recommendation

Duration: 2 Semesters Credit: 1.0

The first semester takes an overview look at the functions from Algebra 2 - Linear, Quadratic, Polynomial, Radical, Exponential, Logarithmic and Rational - and adds to them the Trigonometric Functions. The first semester will also include a unit on probability. During the second semester, the course covers the basics of statistics to explore how data and statistics

are used in our everyday lives. This is not your typical math class, as we will read, research, collect data, interpret data, and discover how data affects us on a regular basis. Problem solving and application to real world problems are integrated throughout the course. Students are expected to be active participants in the learning process. When appropriate, students are guided in discovering the concepts themselves through research, and relating their work to prior knowledge. The graphing calculator is essential to this course as students use it both to discover concepts and strengthen their understanding of concepts.

AL Big Data Analytics

Prerequisites: 2 years of math, IM 2A and teacher recommendation

Duration: 1 semester Credit: 0.5

Big Data Analytics in the simplest of terms refers to the tools, processes, and procedures used 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 manual processing, hence, technologies are required to process the information and to drill for insights. Big Data Analytics is a course that encompasses information technology, science, mathematics, and other areas of STEAM. This course will focus on the conceptual understanding and the application theory behind Big Data Analytics rather than explicit formulas and technical jargon. The main objectives of this course are to create “awareness”, “exposures”, “applications”, 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 of the big data phenomenon.

AP Precalculus

Prerequisites: IM2 and teacher recommendation

Duration: 2 Semesters Credit: 1.0

AP Precalculus is a rigorous and in-depth course that focuses on the study of functions as they relate to modeling dynamic phenomena. This course is designed to better prepare students for college-level applied math and calculus. It provide a strong foundation for other mathematics and science courses. In AP Precalculus, students explore a wide range of function types, including polynomial, rational, exponential, logarithmic, and trigonometric functions. These functions are essential for careers in a variety of fields, including mathematics, physics, biology, health science, social science, and data science. This means that the course is designed to be more than just a stepping stone to higher-level math courses, and it aims to provide students with a well-rounded understanding of the subject. The course contains four unit areas: Polynomial and Rational Functions, Exponential and Logarithmic Functions, Trigonometric and Polar Functions, and Functions Involving Parameters, Vectors, and Matrices

AP Calculus AB

Prerequisites: A minimum letter grade of a C in AP Precalculus and teacher recommendation
Duration: 2 Semesters Credit: 1.0

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. All AP courses in the mathematics department require students to be motivated, disciplined and mature. Successful AP students seek help, self-advocate and are independent learners who enjoy mathematics. AP courses emphasize conceptual understanding in addition to skills mastery.

AP Calculus BC

Prerequisites: A minimum letter grade of a B in AP Precalculus and have completed the 4th unit of precalculus successfully
Duration: 2 Semesters Credit: 1.0

The AP Calculus BC curriculum is designed to be equivalent to both a first- and second-semester college calculus course, offering a more comprehensive exploration of calculus concepts. This advanced, college-level math course covers the same topics as AP Calculus AB, such as limits, derivatives, applications of derivatives, integrals, and applications of integrals. It also extends the calculus applications to include sequences and series, polar coordinates, parametric equations, and vectors. The course places a strong emphasis on both conceptual understanding and mastery of skills. Students will engage with abstract mathematical ideas and theories, equipping them with the knowledge and skills to solve complex problems in various fields of science, engineering, and economics. Students enrolled in BC Calculus are expected to have a strong foundation in Algebra and to be highly motivated, disciplined, and mature. The course is designed for those who are not only passionate about mathematics but also capable of independent exploration and self-advocacy. Success in this fast-paced and rigorous course requires proactive engagement, including seeking help and utilizing available resources.

AP Statistics

Prerequisites: Letter grade of A in Integrated Math 1 Accelerated with teacher recommendation or a grade of B or better in Integrated Math 2
Duration: 2 Semesters Credit: 1.0

AP Statistics is equivalent to an introductory college level Statistics course. This course introduces students to the major concepts and tools for collecting, analyzing and drawing conclusions from

data. Four broad conceptual themes are presented: Exploring Data, Sampling and Experimentation, Anticipating Patterns and Statistical Inference. A TI Nspire graphing calculator will be used extensively in class and on all forms of assessment. Students who do

well in AP Statistics are skilled in reading analytically and have experience writing logically and for technical precision. All AP courses in the mathematics department require students to be motivated, disciplined and mature. Successful AP students seek help, self-advocate and are independent learners who enjoy mathematics. AP courses emphasize conceptual understanding in addition to skills mastery.

AP Computer Science A

Prerequisites: One year of HS math AND teacher recommendation. (Foundations of CS will be strongly recommended from 2025-2026 and beyond)
Duration: 2 Semesters Credit: 1.0
The AP Computer Science course is a college-level introduction to computer science. A large part
of the course is built around the development of computer programs or parts of programs that correctly solve a given problem. The course also emphasizes the design issues that make programs understandable, adaptable and, when appropriate, reusable. AP Computer Science utilizes Java and emphasizes object-oriented programming methodology with a concentration on problem solving and algorithm development. In addition, an understanding of the basic hardware and software components of computer systems and the responsible use of these systems are integral parts of the course. To be successful in the course and perform well on the AP exam, students must have excellent reading comprehension skills to understand complex free response question prompts.

Multi-Variable Calculus

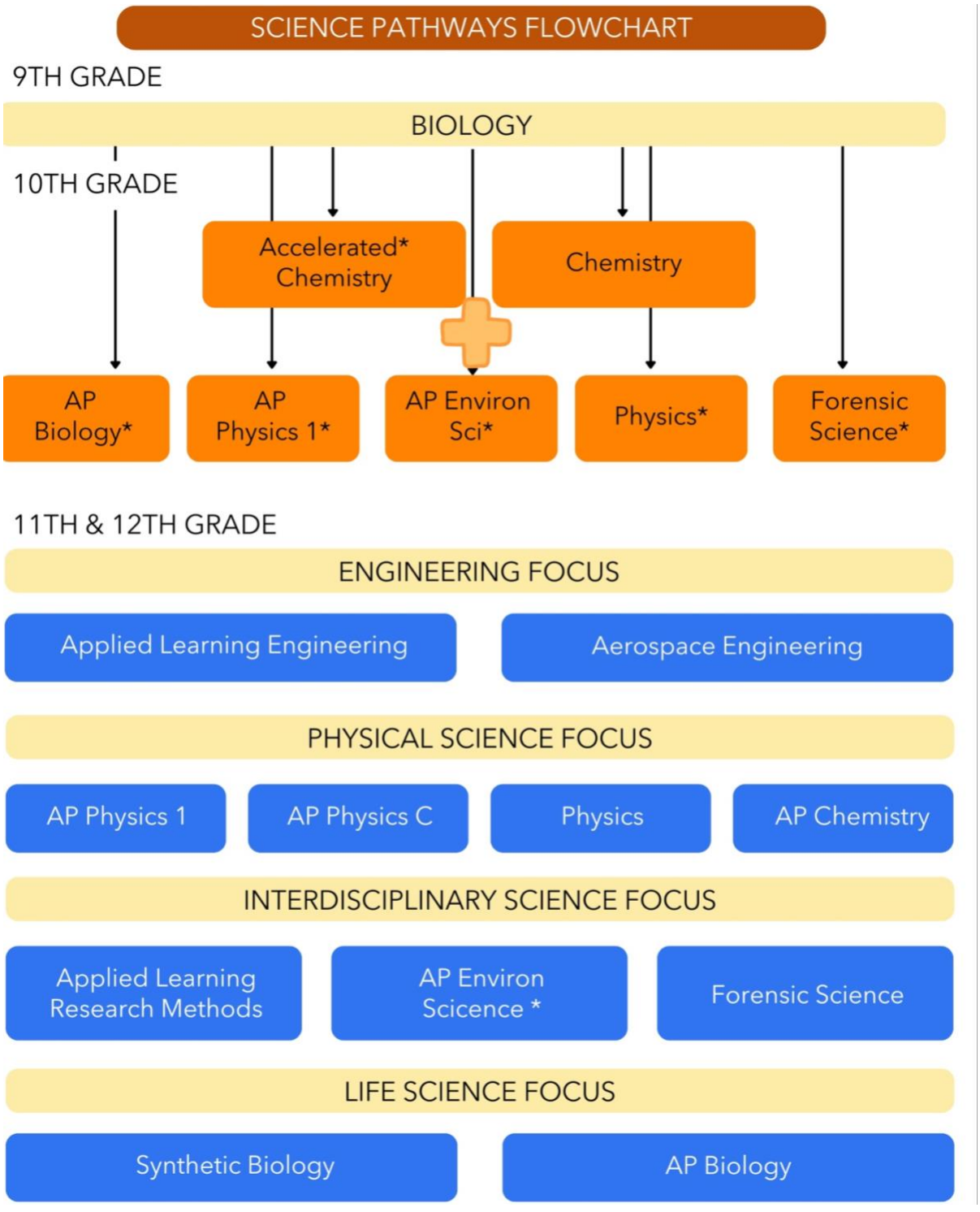
Prerequisite: Successful completion of Calculus BC and teacher recommendation.
Duration: 2 Semesters Credit: 1.0
This advanced high school course in Multivariable Calculus is intended for students who have completed AP Calculus BC, requiring strong geometry knowledge and a high level of self-discipline. The course stretches beyond typical high school content, demanding extra effort for mastery. It explores multivariable functions like z = f(x, y, z), essential for understanding complex real-world applications through project-based-learning in vector-calculus. Building on AP Calculus BC principles, students learn to differentiate and integrate multivariable functions, enhancing their understanding of geometric aspects and visualization of functions in new dimensions. Key objectives include mastering multivariable derivatives, integrals, vector operations, and understanding important concepts like the gradient and optimization problems involving multiple variables. The course structure is divided into four major units: Vectors, Partial Derivatives, Double and Triple Integrals, and Line and Surface Integrals, with each unit building upon the previous ones. Students are expected to commit significant time to each session to fully grasp and apply the concepts.

SCIENCE

In today's rapidly evolving scientific landscape, professionals must excel not only in technical literacy but also in interpersonal and collaborative skills. At Concordia, we strive to develop scientifically literate students who can adapt quickly by applying logical thinking and networking capabilities in a world where technology and knowledge constantly shift. Our science courses highlight the benefits and limitations of scientific innovation, guiding students to make informed decisions and encouraging ethical research that responsibly conserves global resources. We also nurture our learners' innate curiosity, broadening their environmental perspectives and deepening their sense of connectedness to the world around them.

The Concordia science curriculum provides comprehensive experiences in the major scientific disciplines—Life Science and Physical Science—complete with extensive lab work in our cutting-edge facilities. Students must complete three science credits to fulfill graduation requirements.

G9-12 SCIENCE PATHWAYS FLOWCHART



Biology

Prerequisite: Science 8

Duration: 2 Semesters Credit: 1.0

Biology is a year-long introduction to the study of life across the planet, focusing on the requirements for life and the interactions between organisms and their environments.

Topics include genetics, cell anatomy, cellular respiration, photosynthesis, mutations, evolution, and natural selection. Students participate in multiple lab experiences and projects per unit, enhancing skills in experimentation, data collection, analysis, and scientific reporting.

Chemistry

Prerequisite: IM1 and Biology

Duration: 2 Semesters Credit: 1.0

This course is ideal for students who wish to fulfill their basic chemistry requirement without pursuing the subject further. It emphasizes developing a structured and logical approach to problem-solving in chemistry. The curriculum includes foundational concepts and terms essential to high school chemistry, such as atomic theory, gas laws, periodicity, molecular theory, and the study of acids, bases, salts, solutions, and chemical reactions. The course also links these topics to atomic structure. Integrated lab experiments are a crucial part of the course, designed to reinforce these concepts while developing a wide range of lab skills, data analysis techniques, and abilities in experimental reporting. Students who excel in this course may choose to take AP Chemistry in the future, although they may initially be at a slight disadvantage compared to peers who have taken an accelerated course.

Accelerated Chemistry

Prerequisite: Concurrent enrollment in Accelerated IM2 or AP Precalculus; Teacher Recommendation for rising sophomores.

Duration: 2 Semesters Credit: 1.0

This Accelerated Chemistry course is tailored for students aiming to take AP Chemistry in the future. It emphasizes a structured and logical approach to problem-solving, alongside a deep understanding of fundamental chemical principles. Covering a range of topics including atomic theory, gas laws, periodicity, molecular theory, acids, bases and salts, oxidation-reduction, solutions, and chemical reactions, the course prepares students thoroughly for advanced studies. The pace is quicker than regular chemistry classes, and integrated lab experiments are key to developing extensive laboratory skills, data analysis techniques, and proficiency in experimental reporting. This course is an essential stepping stone for those planning to enroll in AP Chemistry.

Aerospace Engineering

Prerequisites: IM2/Algebra 2 and past or current enrollment in physics or AP physics 1; Recommendation from current Science Teacher required.

Duration: 1 semester Credit: 0.5

Aerospace Engineering is a STEM (Science, Technology, Engineering, and Math) course that begins with the introduction to the aerospace field and the history of flight. The fundamentals of aerodynamics, control systems, propulsion, concepts, and approaches of aerospace engineering

are highlighted in this course. In addition, the principles of navigation and aerospace physiology will also be covered to gain a better understanding of why Unmanned Aerial Vehicles (UAV) are now an important part of aerospace engineering. Practical hands-on laboratory experience such as model building; testing and flying UAV; flight simulator training on flight simulators are an integral part of this course. Emphases will also include interdisciplinary work, work outside of the classroom, process work, group work, and applying skills from other courses. Students are to also seek new solutions, creativity, and innovation. Students will make informed decisions about their future in aerospace engineering upon the completion of this course.

Forensic Science

Prerequisites: Two years of science (one year of Life Science and one year of Chemistry recommended); For rising Sophomores: Concurrent enrollment in IM2, basic or accelerated chemistry, plus a minimum grade of 90% in IM1 semester 1 and 93% in Biology semester 1; Teacher Recommendation required.

Duration: 2 Semesters Credit: 1.0

Forensic science introduces students to crime scene investigation through scientific practices: collecting viable evidence, analyzing collected evidence, and presenting findings. Students will also learn about the contributions of investigative professionals (detectives, medical examiners, etc.) and the efficacy and limitations of investigative techniques (DNA testing, toxicology, fingerprinting, etc.) to solve crimes. The course will also introduce students to psychological profiling and forensic anthropology applications for cold case crimes. Forensic science includes the application of concepts from biology, chemistry, and physics to practical problems faced by law enforcement professionals. Students interested in multiple disciplines of science and psychology may be attracted to this course – particularly if they are interested in a career in law enforcement.

Physics

Prerequisites: Two years of science (one year of Life Science and one year of Chemistry recommended); For rising Sophomores: Concurrent enrollment in IM2, basic or accelerated chemistry, plus a minimum grade of 90% in IM1 semester 1 and 93% in Biology semester 1; Teacher recommendation required.

Duration: 2 Semesters Credit: 1.0

The study of physics is the basis of all the other sciences; physics shows students how mathematical equations may be considered abbreviated guides to thinking, rather than algebraic recipes that will produce the correct answer. This physics course is designed for

students who wish to pursue non-science careers and require a background in physics and for those students who wish to pursue a science-related field and desire a firm conceptual base for their further education.

AL Synthetic Biology

Prerequisites: Completion of AP Biology and Accelerated Chemistry; Teacher Recommendation from current Science Teacher required.

Chemistry Duration: 2 Semesters Credit: 1.0

AL Synthetic Biology is an exciting and rapidly evolving field of science which can transform our understanding of biological systems and our ability to use them for human benefit. In this course, students will learn how to apply engineering principles (design, build and test) into genetic engineering research practices. The aim of synthetic biology is to use genetic engineering to create bacteria with novel functions, which are then applied to solve real world problems. In this class students will test cells containing their synthesized DNA circuits work according to their design plan. Students who take this course will also have the opportunity to participate in the international genetically engineered machines (iGEM) competition.

Applied Learning (AL) Engineering

Prerequisites: Two years of science; Completion or concurrent enrollment in IM2/Algebra 2 with a minimum grade of B; Recommendations from current Math and Science teachers required.

Duration: 2 Semesters Credit: 1.0

This course builds engineering skills by providing students with several realistic projects that require teamwork, problem solving, analytical thinking and creativity to complete. The major goals of the course are to expose students to the engineering design process, research and analysis, teamwork, communication methods, robotics, computer-aided design (CAD), programming, engineering standards and technical documentation. Students will work in teams to solve real problems using skills from across disciplines to communicate the issues, research potential solutions, build and test prototypes, creatively problem solve, and design finished creations that are aesthetically pleasing, robust and fulfill specific design requirements. Students will be assessed based on several projects split across the year, covering both hands-on and computer-based work.

Applied Learning (AL) Scientific Research

Prerequisites: Two years of science (one year of Life Science and one year of Chemistry required); Recommendation from current Science Teacher required.

Duration: 2 Semesters Credit: 1.0

The Applied learning Scientific Research course is designed as an experiment-based course ideal for students looking for a solid foundation in a research lab before they attend college. Students will have the choice to work on an independent research topic or join a larger team

within the class to work on a guided research topic. The goals of this course are 1) To develop the skills needed to design and conduct a unique and relevant research project; 2) To build a knowledgebase of how to use a variety of instrumentation, analytical techniques and literature databases. Exceptional work may have the opportunity to publish their findings in a science journal or enter an appropriate scientific competition.

AP Biology

Prerequisites: Two years of science (one year of Life Science and one year of Accelerated/AP Chemistry recommended); For rising Sophomores: Concurrent enrollment in accelerated chemistry, plus a minimum grade of 93% in IM1 semester 1 and 93% in Biology semester 1; Recommendation from current Science Teacher required.

Duration: 2 Semesters Credit: 1.0

AP Biology is an introductory college-level biology course. Students cultivate their understanding of biology through inquiry-based investigations as they explore topics like evolution, energetics, information storage and transfer, and system interactions. This course provides a foundation for future studies in the life sciences. AP Biology incorporates four big ideas that frame and guide the course. The big ideas include: 1. evolution drives the diversity and unity of life, 2. biological systems utilize free energy and molecular building blocks to grow, to reproduce and to maintain dynamic homeostasis, 3. living systems store, retrieve, transmit, and respond to information essential to life processes, and 4. biological systems interact, and these systems and their interactions possess complex properties. In addition to these big ideas the practices of science are emphasized throughout the course. Students will develop the skill of supporting claims with evidence and providing sound scientific reasoning to link claims and evidence.

AP Chemistry

Prerequisites: Accelerated Chemistry or Teacher Recommendation

Duration: 2 Semesters Credit: 1.0

AP Chemistry is designed to be equivalent to university-level general chemistry coursework usually taken during the first year of college. Course content is structured around Big Ideas (and associated Enduring Understandings) provided by the College Board. AP Chemistry Big Ideas: Scale, Proportion, and Quantity; Structure and Properties; Transformations; and Energy. Specific learning objectives also address scientific inquiry and reasoning skills described as Science Practices within the AP Chemistry curriculum framework. The laboratory experience is the equivalent to that offered in a typical college course.

AP Environmental Science

Prerequisites: Two years of science (one year of Life Science and one year of Chemistry); For rising Sophomores: Concurrent enrollment in accelerated chemistry, plus a minimum grade

of 93% in IM1and 93% in Biology semester 1; Recommendation from current Science Teacher required.
Duration: 2 Semesters Credit: 1.0
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.

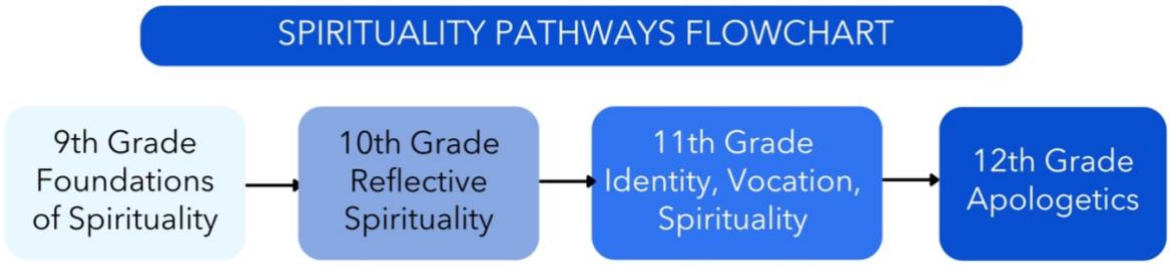
AP Physics 1
Prerequisites: For rising Sophomores: Concurrent enrollment in accelerated chemistry, completion of Accelerated IM1, and a minimum grade of 'A' in both Accelerated IM1 and Biology in semester 1. Recommendation from current Science and Math teachers required. For rising Juniors and Seniors: Concurrent enrollment in AP Pre-Calculus or higher. Recommendation from current Science and Math teachers.
Duration: 2 Semesters Credit: 1.0
AP Physics 1 is an algebra-based, introductory college-level physics course that explores topics such as Newtonian mechanics (including rotational motion); work, energy, and power; momentum and collisions; and simple harmonic motion. Through inquiry-based learning, students will develop scientific critical thinking and reasoning skills. The AP Physics 1 course focuses on the big ideas typically included in the first semester of an algebra-based, introductory college-level physics sequence and provides students with enduring understandings to support future advanced coursework in the sciences. Through inquiry-based learning and open-ended laboratories, students will develop critical thinking and reasoning skills. Students are expected to spend 25 percent of their time on laboratory experiences.

AP Physics C: Mechanics & Electricity/Magnetism
Prerequisites: Completion of AP Physics 1; Completion or concurrent enrollment in Calculus BC with a B+ or better.
Duration: 2 Semesters Credit: 1.0
This course ordinarily forms the first portion of the college sequence that serves as the foundation in physics for students who are going to major in the physical sciences or engineering. This course is designed to be preceded or paralleled by a course in Calculus. Methods of Calculus are used whenever appropriate in formulating physical principles and in applying them to physical problems. The use of Calculus will increase as the course progresses with extensive use during the second half of the course in formulating principles and solving problems. Emphasis is placed on solving a variety of challenging problems, some requiring Calculus, and there is an emphasis on application and analysis in the laboratory as well as in the classroom. Prior Physics coursework is highly recommended.

SPIRITUALITY

Self exploration is a critical part of adolescence and we believe in holistically supporting students physically, mentally, emotionally and spiritually through this time. Our Spirituality courses address the spiritual aspect of the learner and help students recognize, define and articulate their own spiritual identity; as it relates to the Christian faith as found in the Bible. One semester credit course each year in Spirituality is required for graduation.

G9-12 SPIRITUALITY PATHWAYS FLOWCHART



9th Grade Foundations of Spirituality
Prerequisites: None; required course
Duration: 1 semester Credit: 0.5
The purpose of this class is to give a brief introduction to topics relating to basic spiritual thought and faith. Diagloue and critical thinking will be key components of the course to develop communication and intrapersonal skills as it pertains to spiritual thought.

10th Grade Reflective Spirituality
Prerequisites: None; required course
Duration: 1 semester Credit: 0.5
The purpose of this class is to visit questions pertaining to broad spiritual topics through discourse and critical thinking activities. Students will survey major world religions and think critically concerning the beliefs and practices as it compares to Christianity. Students will begin thinking about who they are spiritually and how their beliefs determine who they are becoming.

11th Grade Identity, Vocation, Spirituality
Prerequisites: None; required course
Duration: 1 semester Credit: 0.5
The purpose of this class is to take an advanced survey into topics concerning spirituality with discourse, personal reflection, and critical thinking as the key driving components. Students will explore their own identities, what this means in their daily vocations, and how spirituality interacts with their daily life.

12th Grade Apologetics

Prerequisites: None; required course

Duration: 1 semester Credit: 0.5

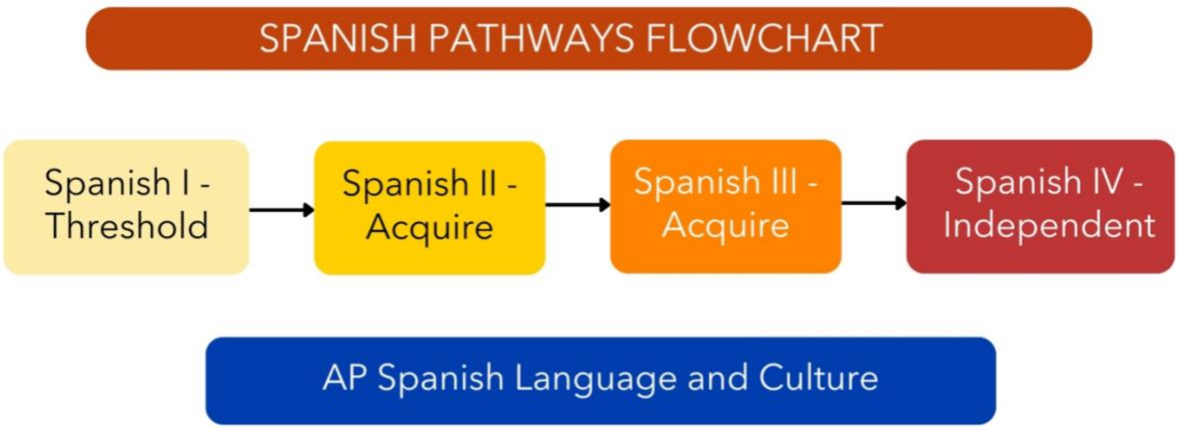
Apologetics is an in depth look into the personal application of historical and modern day spiritual belief and practice. Significant time is given to personal exploration of advance spiritual topics in light of personal faith development. This course includes interactive study of spiritual places and activities.

World Language-Spanish

We believe all students benefit from learning a second language. In fact, we feel so strongly about this that we require all graduating students to successfully complete two credits of Mandarin or Spanish. Learning a foreign language demands flexibility in thinking and fosters an ability to think cross-culturally. These skills are in high demand, especially in the world beyond Concordia.

Two consecutive credits in World Language are required for graduation.

G9-12 SPANISH PATHWAYS FLOWCHART



Spanish I - Threshold

Prerequisites: Teacher recommendation as needed

Duration: 2 Semesters Credit: 1.0

Threshold (Spanish I) is a course that introduces students to the Spanish language and culture. This course is built to provide the students with various opportunities to work in their Spanish proficiency level from Novice low to Novice Low level in the three communicational modes Interpretative (Listening and writing), Interpersonal (person to person) and Presentational (Speaking writing) supported by the five goal areas outlined in the Standards for Foreign Language Learning in the 21st Century (Communication, Cultures, Connections, Comparisons, and Communities) and has been carefully aligned to national standards as set forth by ACTFL (the American Council on the Teaching of Foreign Languages). Students may enter this course with no previous background in Spanish or with a background that is not sufficient to constitute a high school level course in Spanish. This course builds connections to the 6 AP Spanish themes Families and Communities, Science and Technology, Beauty and Aesthetics, Contemporary Life, Global Challenges, and Personal and Public Identities. Students should expect to be actively engaged in their own language learning, understand basic vocabulary terms and phrases, use of simple tenses in their speaking and writing, participate in

conversations and respond appropriately to conversational prompts, compare cultural practices, products, and perspectives of various Spanish-speaking countries.

Spanish II - Acquire

Prerequisites: Teacher recommendation as needed

Duration: 2 Semesters Credit: 1.0

Acquire I (Spanish II) is an Intermediate Mid in a high school level course that give opportunities to students to improve their Spanish proficiency level to navigate from Novice High, Intermediate Low-level to Intermediate Mid-level in the three communicational modes (Interpretative (Listening and writing), Interpersonal (person to person) and Presentational (Speaking writing) supported by the five goal areas outlined in the Standards for Foreign Language Learning in the 21st Century (Communication, Cultures, Connections, Comparisons, and Communities) and has been carefully aligned to national standards as set forth by ACTFL (the American Council on the Teaching of Foreign Languages). This course builds connections to the 6 AP Spanish themes Families and Communities, Science and Technology, Beauty and Aesthetics, Contemporary Life, Global Challenges, and Personal and Public Identities and has been carefully aligned to national standards as set forth by ACTFL (the American Council on the Teaching of Foreign Languages). Each unit consists of a new cultural knowledge theme such as celebrations, App and games, celebrating the day of the death, learning about specific food, TV shows and more. Reading and listening comprehension activities, speaking and writing activities, multimedia cultural presentations, and interactive activities and practices which reinforce vocabulary and grammar. Students should expect to be actively engaged in their own language learning, understand common vocabulary terms and phrases, use a range of tenses in their speaking and writing, participate in conversations and respond appropriately to conversational prompts, analyze and compare cultural practices, products, and perspectives of various Spanish-speaking countries.

Spanish III - Acquire

Prerequisites: Teacher recommendation as needed

Duration: 2 Semesters Credit: 1.0

Acquire II (Spanish III)- Acquire II is an Intermediate Mid high school level course. Designed to give opportunities to students to expand their skills, structure and vocabulary Intermediate Mid-level in the three communicational modes (Interpretative (Listening and writing), Interpersonal (person to person) and Presentational (Speaking writing) supported by the five goal areas outlined in the Standards for Foreign Language Learning in the 21st Century (Communication, Cultures, Connections, Comparisons, and Communities) and has been carefully aligned to national standards as set forth by ACTFL (the American Council on the Teaching of Foreign Languages). This course builds connections to the 6 AP Spanish themes Families and Communities, Science and Technology, Beauty and Aesthetics, Contemporary Life, Global Challenges, and Personal and Public Identities issues of Spanish-speaking societies

such as: exploring arts, music artists like Celia Cruz and salsa music, pros and cons of connecting with social media, discovering Costa Rica and its beauty within others. Students should expect to be actively engaged in their own language learning, understand common vocabulary terms and phrases, use a wide range of tenses in their speaking and writing, participate in conversations and respond appropriately to conversational prompts, analyze and compare cultural practices, products, and perspectives of various Spanish-speaking countries, Reinforce and further your knowledge of other disciplines (math, science, art, etc.) through the use of Spanish.

Spanish IV - Independent

Prerequisites: Teacher recommendation as needed

Duration: 2 Semesters Credit: 1.0

Independent (Spanish 4) is an Intermediate Mid-high course in a High school level course that builds on Intermediate Mid and it is designed to give opportunities to students to prepare for the higher level of proficiency from Intermediate Mid to the Intermediate High level in the three communicational modes (Interpretative (Listening and writing), Interpersonal (person to person) and Presentational (Speaking writing) supported by the five goal areas outlined in the Standards for Foreign Language Learning in the 21st Century (Communication, Cultures, Connections, Comparisons, and Communities) and has been carefully aligned to national standards as set forth by ACTFL (the American Council on the Teaching of Foreign Languages). This course builds on connections to the 6 AP Spanish themes Families and Communities, Science and Technology, Beauty and Aesthetics, Contemporary Life, Global Challenges, and Personal and Public Identities issues of Spanish-speaking societies such as: Cultural identity, Natural disasters and the impact on the people, Improving our community, Investigating about illness and remedies, Discovering chef and recipes, Tales and legends, and Working in the travel industry are some of the theme discussed in class. Students should expect to be actively engaged in their own language learning, understand common vocabulary terms and phrases, use a wide range of tenses in their speaking and writing, participate in conversations and respond appropriately to conversational prompts, analyze and compare cultural practices, products, and perspectives of various Spanish-speaking countries, Reinforce and further your knowledge of other disciplines (math, science, art, etc.) through the use of Spanish.

AP Spanish Language and Culture

Prerequisites: Teacher recommendation as needed

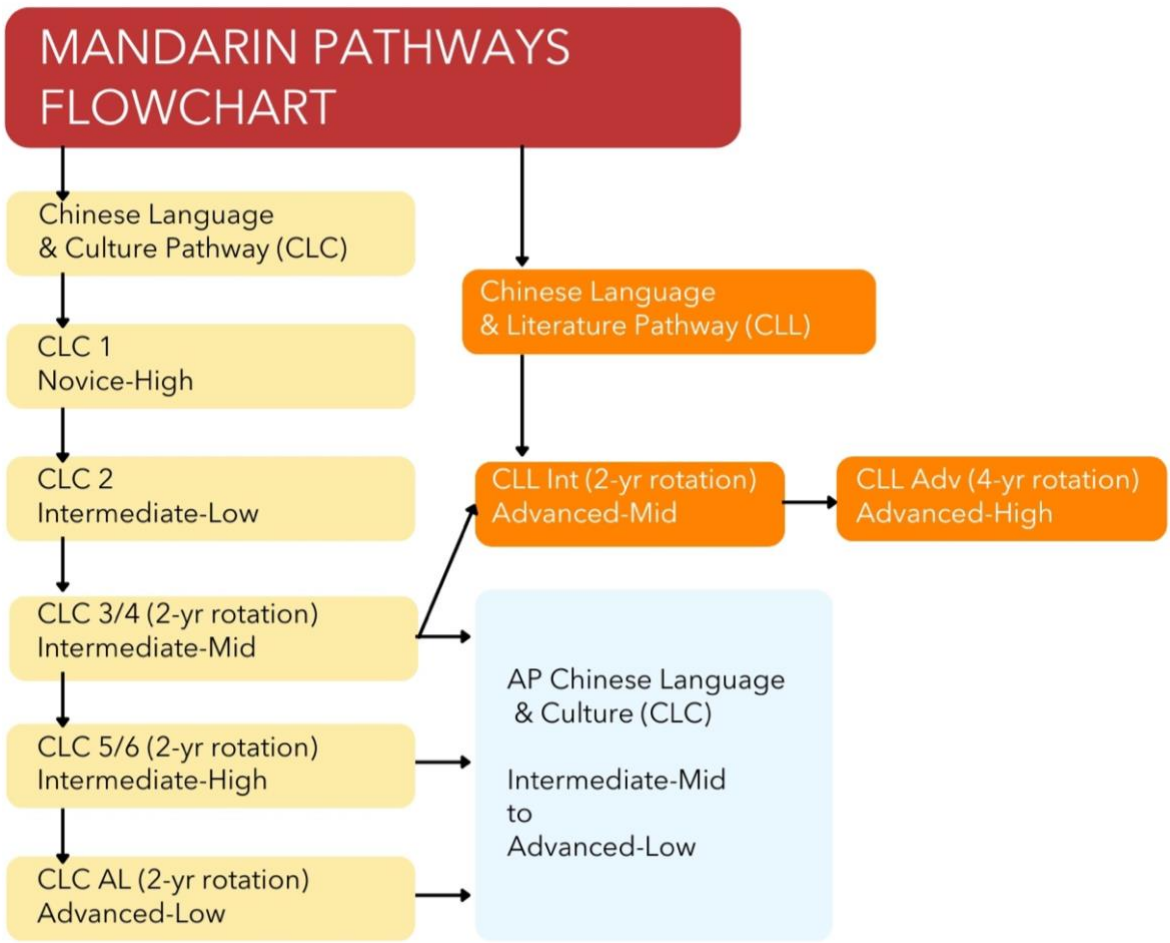
Duration: 2 Semesters Credit: 1.0

This AP Spanish Language and Culture course is built to provide the students with various opportunities to further their Spanish proficiency level in Advanced low level in the three communicational modes supported by the five goal areas outlined in the Standards for Foreign Language Learning in the 21st Century (Communication, Cultures, Connections, Comparisons, and Communities) in order to prepare them for the AP Spanish Language and

Culture Examination. It will be enhanced through developing their skills of identifying and summarizing main points and details as well as predicting the outcomes from various authentic articles from the Hispanic world. Students will continue learning about the cultures in Spanish-Speaking parts of the world and will compare with their own countries through the 6 AP Spanish themes Families and Communities, Science and Technology, Beauty and Aesthetics, Contemporary Life, Global Challenges, and Personal and Public Identities. Students will practice communicating in Spanish and study real-life materials such as newspapers articles, films, videos, music, and books. The AP Spanish Language and Culture class will be taught exclusively in Spanish. Students are also required to speak Spanish as much as possible in the classroom and in settings outside the classroom like Skype session, cooking class, etc.

World Language-Mandarin

G9-12 MANDARIN PATHWAYS FLOWCHART



Chinese Language and Culture 1

Prerequisites: None

Duration: 2 Semesters Credit: 1.0

Chinese Language & Culture 1 (Novice) is designed for students with little to no prior learning experience. This course emphasizes the development of language skills and cultural awareness. Students will use simple sentences to express themselves and exchange information on familiar topics. The course is taught in Mandarin Chinese, with increased use of authentic materials that address world language themes. The units of study cover topics such as “All About Me,” “My Family,”, “My Hobbies,” and “My Daily Routine.” Chinese phonics (Pinyin) and Chinese writing (Hanzi) will be introduced. Assessment of all communication is geared toward the Novice High proficiency level.

Chinese Language and Culture 2

Prerequisites: Teacher recommendation as needed

Duration: 2 Semesters Credit: 1.0

Chinese Language & Culture 2 (Intermediate Low) is designed for the students who are assessed out of Novice High in the four skills of the Chinese language. This course emphasizes the development of language skills and cultural awareness. Students will explore familiar and everyday topics to enhance their communication skills and cultural awareness. They will learn to identify topics and related information from simple sentences in short texts, and the main ideas in short conversations. The units of study will cover topics such as "My Extended Family," "Sports and Hobbies," "Sickness and Health," "Weather and Seasons," and "My School." The course is taught in Mandarin Chinese, with increased use of authentic materials that address world language themes. Assessment of all communication is geared toward the Intermediate Low level.

Chinese Language and Culture 3-4

Prerequisites: Teacher recommendation as needed

Duration: 2 Semesters Credit: 1.0

Chinese Language & Culture 3-4 (Intermediate Mid) is a two-year course designed for students assessed at the Intermediate Low level. This course aims to prepare students to understand the main idea and key information in short informational and fictional texts; and to exchange information and ideas in conversations on familiar topics, preferences, and feelings using a series of sentences and asking a variety of follow-up questions. The units of study covers topics such as "Personality and Friends," "School Curriculum and Activities," "Eating Habits and Healthy Lifestyle," "Leisure and Festivals," and "Environmental Protection and Technology."

The course is taught in Mandarin Chinese, with an increased use of authentic materials that address world language themes. Assessment of all communication is geared toward the Intermediate-Mid level.

Chinese Language and Culture 5-6

Prerequisites: Teacher recommendation as needed

Duration: 2 Semesters Credit: 1.0

Chinese Language & Culture 5/6 (Intermediate High) is a two-year course and designed for the students who have demonstrated proficiency at the Intermediate Mid-level. This course aims to prepare students to develop the ability to communicate on a variety of familiar and researched topics, using connected sentences that may form cohesive paragraphs, and to follow the main message and story in various time frames within paragraph-length texts. Students also learn to ask and respond to questions across various time frames. The units of study cover topics such as "Personal Growth and Development," "Travel and Study Abroad,"

"Famous People," "Food and Nutrition," and "Technology in Modern Times," with each topic deeply integrated with elements of Chinese culture. Assessment of all communication is geared toward the Intermediate-High level.

AP Chinese Language and Culture

Prerequisites: Teacher recommendation as needed

Duration: 2 Semesters Credit: 1.0

AP Chinese Language & Culture is equivalent to an intermediate-level course in Chinese. This course is to prepare students to cultivate their understanding of Chinese language and culture by applying the interpersonal, interpretive, and presentational modes of communication in real-life situations as they explore concepts related to family and community, personal and public identity, beauty and aesthetics, science and technology, contemporary life, and global challenges. The course emphasizes authentic communication in Mandarin, integrating real-world materials such as newspaper articles, films, videos, music, and books. Students will explore and strengthen their understanding of the products, practices, and perspectives of Chinese cultures worldwide. Higher-order thinking skills are central to the course, as students analyze, evaluate, infer, conclude, and predict across various contexts, fostering both linguistic and cultural proficiency.

Chinese Language and Culture- Advanced

Prerequisites: Teacher recommendation as needed

Duration: 2 Semesters Credit: 1.0

Chinese Language & Culture Advanced is a two-year course designed for students assessed at the Intermediate High level. This course prepares students to identify the underlying message and follow the main story, along with some supporting details, across major time frames in informational and fictional texts; It also enables them to express themselves adequately on familiar and concrete social, academic, and professional topics. Students can deliver presentations using paragraphs across major time frames. Products, practices, and perspectives of different cultures are explored and strengthened. Higher-level thinking is key as students seek to analyze, evaluate, infer, conclude, and predict within the various contexts explored.

The units of study will cover topics such as "Digital Citizenship," "Cultural Identity and Globalization," "Sustainable Practices across the Globe," "Health and Wellness: East Meets West," "Innovation in Technology" and other topics. Assessment of all communication is geared toward the Advanced-Low level.

Chinese Language and Literature-Intermediate

Prerequisites: Teacher recommendation as needed

Duration: 2 Semesters Credit: 1.0

Chinese Language & Literature-Intermediate is a two-year course that integrates Mandarin learning with literature and social studies, empowering students to apply their language skills to engage with local communities. Through this course, students will enhance their reading and writing abilities by analyzing historical figures, studying traditions and customs from various regions, and exploring current events through a diverse range of media. The curriculum also includes components of Chinese culture, history, and classical poetry to provide a comprehensive learning experience.
Assessments focus on communication skills aligned with the Advanced-Mid proficiency level, ensuring students are well-prepared to use Mandarin effectively in real-world contexts.

Chinese Language and Literature-Advanced
Prerequisites: Teacher recommendation as needed
Duration: 2 Semesters Credit: 1.0
Chinese Language & Literature Advanced is a four-year course designed for students assessed at Advanced Mid Level. The course aims to deepen students' literacy development by engaging them with a diverse range of literary and informational texts that span various genres, cultures, and historical periods. Students will analyze and interpret themes, characters, and narrative techniques while drawing cross-cultural comparisons to enhance their understanding of global literature. Additionally, the course encourages creative expression through original writing and fosters critical thinking by exploring different literary theories and media works. By examining the relationship between literature and social change, students will appreciate the profound impact literature has on society, ultimately cultivating a lifelong love for reading. Assessment of all communication is geared toward the Advanced-High level.

FINE ARTS

Study of the Fine Arts is not peripheral to the rigorous academic curriculum at Concordia. In fact, music, theatre and visual arts are integral in our students' course of study and diverse co-curricular life at all grade levels. As our students grow, so does their opportunity to move from dabbling in all mediums to more intensive exploration into disciplines they have grown to love. Concordia fine arts students, across disciplines, are taught to synthesize thought, perception and hone their passion in the arts. Our program strives to inspire and nurture students. Performance and production are key components of the fine arts and provide remarkable opportunities to hone leadership and collaborative skills. Individuals are encouraged to express their personal artistic gifts and strengthen their creative thinking through the development of technical skill, process and problem solving. Two credits in Fine Arts are required for graduation.

PERFORMING ARTS- BAND

Concert Band

Prerequisites: Two years of prior band experience (or by audition, if less)

Duration: 2 Semesters Credit: 1.0

Concert Band is open to students who already play a wind or percussion instrument, read music and wish to join. Members will perform on at least four concerts per year. Band members will learn scales, sight-reading and simple elements of music theory. Band Members will perform varying styles of Band and Wind Literature that will include baroque, classical, romantic, contemporary, folk, pop, rock, jazz and multi-cultural repertoire. This is a performance-based ensemble, where concerts take place in the evening and perhaps on weekends. By signing up, you are committing to this type of schedule. Concert attire will be made by a tailor and is at the expense of the band member.

Wind Ensemble

Prerequisites: Audition

Duration: 2 Semesters Credit: 1.0

The Wind Ensemble is an advanced and auditioned group offered to students who want to continue growing in their musical skill. Members will perform on at least four concerts per year. Band members will learn advanced scales, sight-reading and elements of music theory. Band Members will perform varying styles of Band and Wind Literature that will include baroque, classical, romantic, contemporary, folk, pop, rock, jazz and multi-cultural repertoire. This is a performance-based ensemble, where concerts take place in the evening and perhaps on weekends. By signing up, you are committing to this type of schedule. Concert attire will be made by a tailor and is at the expense of the band member. Auditions will take place in May and in August (for newly arriving students). It is an expectation that this ensemble will

make up the core of the APAC Band Members. If selected, students are required to travel at their expense. Students should understand this before auditioning for the Wind Ensemble.

Percussion Ensemble

Prerequisites: Audition (Recommended 2 Year of Piano Lessons)

Duration: 2 Semesters Credit: 1.0

Percussion ensemble is a class for percussion students to continue to develop their skills on an individual basis. Allowing for approaching mastery of some instruments and basic skills for others. This class provides support for all the Bands in every concert, as well as other Ensembles upon request. The students are also required to perform percussion ensemble pieces in concerts and are encouraged to audition for AMIS and APAC.

This class is for all skill levels and experiences! It is advised that the students have 2 years of piano lessons.

AP Music Theory (#)

Prerequisites: Previous theory courses are recommended. Concurrently enrolled in a music course.

Duration: 2 Semesters Credit: 1.0

AP Music Theory is an intense study of music theory with a concentration on both writing and analyzing 18th counterpoint as well as figured bass. Sight singing and reading as well as composition are also incuded. This course is for students who have an interest in continuing on in music.

Foundations of Band (#)

Prerequisites: Previous theory courses are recommended. Concurrently enrolled in a band, percussion, or strings course.

Duration: 2 Semesters Credit: 1.0

Foundations class is for instrumentalists looking to improve their solo and ensemble skills. Technique, Tone, Expression will be a focus of the work for this class. Each student will work towards individual goals set by the student and teacher. Think of this as dedicated practice time where you will learn skills to become more efficient in your practice time and better at your instrument.

Assessment for this course will be your Creative Journal and 2 performance excerpts a semester.

Jazz Ensemble

Prerequisites: Audition

Duration: 2 Semesters Credit: 1.0

The Jazz Ensemble is offered to students who want to develop and grow in their performance and understanding of jazz. Instrumentation is limited to those in a standard jazz ensemble:

saxophones, trumpets, trombones, percussion, keyboards and guitars. Members will perform on at least four concerts per year. Band members will learn advanced scales, sight-reading and elements of jazz theory. Band Members will perform varying styles of Jazz Literature that will include swing, bebop, big band, blues, Dixieland, funk, pop, rock, gospel, fusion and multi-ethnic repertoire. This is a performance-based ensemble, where concerts take place in the evening and perhaps on weekends. By signing up, you are committing to this type of schedule. Concert attire will be made by a tailor and is at the expense of the band member. Auditions take place in May and in August (for newly arriving students, if slots are available). It is an expectation that this ensemble will make up the core of the APAC Band Members. If selected, students are required to travel at their expense.

PERFORMING ARTS - CHOIR

Concordia Singers

Prerequisites: None

Duration: 2 Semesters Credit: 1.0

This choir is open to any high school student in grades 9 to 12, no audition needed. Members will sing on 3-4 major concerts per year. Choir members will learn scales, sight singing and rhythm reading. Singers will perform varying styles of choral literature that may include: renaissance, baroque, classical, romantic, contemporary, folk, multi-cultural and popular repertoire. This is a performance-based ensemble, where concerts take place in the evening and perhaps on weekends. By signing up, you are committing to this type of schedule. Concert attire (tux or gown with dress shoes) will be at the expense of each singer. Interested members may audition for the AMIS International Honor Choir - a choir festival held within Asia, Europe or the Middle East at the end of February or March of each school year. If the audition is successful, the trip is entirely at the expense of the singer. Expenses include: airfare, hotel, music and performance fees, ground transportation, meals, etc.

Collegium (Men's) Choir

Prerequisites: Audition

Duration: 2 Semesters Credit: 1.0

This men's choir is open for intermediate/advanced ability level male singers in grades 10 to 12 who pass an audition. Collegium is offered to challenge male singers who want to learn intermediate & advanced repertoire. This graded class will consist of experienced singers who are willing to commit their talents for 3-4 performances per year. Choir members will review scales and learn advanced sight singing and advanced rhythm reading. Singers will perform varying styles of choral literature that may include renaissance, baroque, classical, romantic, contemporary, folk, multi-cultural, musical theatre and pop repertoire. This is a performance-based ensemble, where concerts take place in the evening and perhaps on weekends. By auditioning, you are committing to this type of schedule. Auditions will take place in May and in August (for newly arriving students). Concert attire (tuxedo with dress shoes) will be at the expense of each singer. Interested members may audition for the AMIS International Honor

Choir - a choir festival held within Asia, Europe or the Middle East at the end of February or March each school year. If the audition is successful, the trip is entirely
at the expense of the singer. Expenses include: airfare, hotel, music and performance fees, ground transportation, meals, etc.

Bel Canto (Women's) Choir

Prerequisites: Audition

Duration: 2 Semesters Credit: 1.0

This women's choir is open for intermediate/advanced ability level female singers in grades 10 to 12 who pass an audition. Bel Canto is offered to challenge female singers who want to learn advanced repertoire. This graded class will consist of experienced singers who are willing to commit their talents for 3-4 performances per year. Choir members will review scales and learn advanced sight singing and advanced rhythm reading. Singers will perform varying styles of choral literature that may include renaissance, baroque, classical, romantic, contemporary, folk, multi-cultural, musical theatre and pop repertoire. This is a performance-based ensemble, where concerts take place in the evening and perhaps on weekends. By auditioning, you are committing to this type of schedule. Auditions will take place in May and in August (for newly arriving students). Concert attire (gown with dress shoes) will be at the expense of each singer. Interested members may audition for the AMIS International Honor Choir - a choir festival held within Asia, Europe or the Middle East at the end of February or March each school year. If the audition is successful, the trip is entirely at the expense of the singer. Expenses include: airfare, hotel, music and performance fees, ground transportation, meals, etc.

Chamber Singers

Prerequisites: Audition

Duration: 2 Semesters Credit: 1.0

This choir is open to advanced singers in grades 10 to 12 who pass an audition. Members will sing on 4-5 major concerts per year. Choir members will review scales and learn advanced sight singing and advanced rhythm reading. Singers will perform varying styles of choral literature that may include renaissance, baroque, classical, romantic, contemporary, folk, multi-cultural and popular repertoire. Choir members are required to take part in the APAC Choir Festival. Each student attending the APAC Choir Festival will pay for airfare, a few meals and may incur some minor personal expenses. Auditions for this choir will take place in May and in August (for newly arriving students). Concert attire (tux or gown with dress shoes) will be at the expense of each singer. Interested members may audition for the AMIS International Honor Choir - a choir festival held within Asia, Europe or the Middle East at the end of February/March each school year. If the audition is successful, the trip is entirely at the expense of the singer. Expenses include: airfare, hotel, music and performance fees, ground transportation, meals, etc.

Vocal Foundations (#)

Prerequisites: Concurrent enrollment in a school choral group

Duration: 2 Semesters Credit: 1.0

Vocal Foundations class is a study of vocal music history with an emphasis on learning and performing vocal songs from the Baroque, Classical, Romantic, and Modern Eras. A foundational historic study of musical instruments, composers, musical styles, music vocabulary and societal influences from each era will also be investigated throughout the year. Students will study various musical styles from each of the different eras of music and will give a recital at the end of each semester where they will perform songs from the time periods of history that we have studied up to that point.

PERFORMING ARTS- STRINGS

Concert Strings

Prerequisites: Minimum of one year prior orchestra experience or instrument study

Duration: 2 Semesters Credit: 1.0

Concert Strings is a string orchestra open to any high school student who already plays a string instrument. Students grades 9-12 are welcome to join in the fun. We play classical music, contemporary music, jazz, rock and multi-cultural music. Students will perform in at least three to four concerts per year. Scales, sight-reading and simple elements of music theory are incorporated into the class. Dress for concerts is formal, made by a tailor, and is at the expense of the student.

Chamber Strings

Prerequisites: Audition

Duration: 2 Semesters Credit: 1.0

Chamber Strings is an auditioned string orchestra for advanced musicians seeking to further develop their technique and musicianship and have fun while doing so. Students will study scales, performance styles, theory, ensemble playing, and historical backgrounds of pieces. As a performance-based ensemble, concerts take place in the evening and on weekends. Dress for concerts is formal, made by a tailor, and is at the expense of the student. This class is our APAC Orchestra, which travels or hosts a festival each November. This involves additional music and an extra cost. Interested members of Chamber Strings will be allowed to audition for the AMIS International Honor Orchestra – an orchestra festival held within Asia, Europe or the Middle East in the middle of March each school year. If the audition is successful, the trip is entirely at the expense of the student. Expenses include: airfare, hotel, music & performance fees, ground transportation, meals, etc.

VISUAL ARTS

Foundations of Art

Prerequisites: None

Duration: 2 Semesters Credit: 1.0
Foundations of Art is an introductory course in the HS Visual Arts program. This studio-based inquiry course focuses on the importance of the creative process – research, ideation, experimentation, revision, and reflection – as a tool to explore their ideas, develop concepts, and themes in visual art. Foundations of Art students have the opportunity to explore a diverse range of materials, processes, and techniques across a variety of 2D, 3D, and interdisciplinary projects. Students will learn how to apply the Principles/Elements of Art/Design, compositional strategies, and exhibition strategies in the creation of unique culminating artworks that convey meaning, communicate ideas, and have personal expression. Foundations of Art is a safe space where students are encouraged to be curious, ask questions, experiment, take risks, and creatively problem solve as artists and engaged lifelong learners.

2D Art Studio
Prerequisites: Foundations of Art
Duration: 2 Semesters Credit: 1.0
2D VIsual Art is an intermediate course which allows students to make further artistic inquiries and in-depth exploration into 2D forms of artmaking. This course builds off the knowledge gained in Foundations of Art. Such explorations will be within processes, themes/concepts, and skills to prepare students for AP 2D Art & Design, AP Drawing, or Open Studio. 2D Visual Art students will explore creative-making processes and development such as research, classroom demonstrations. 2D Viisual Art students will work with pen, pencil, charcoal, painting, and digital artmaking media. 2D Visual Art is a safe space where students are encouraged to be curious, ask questions, experiment, take risks, and creatively problem solve as artists and engage lifelong learners.

3D Art Studio
Prerequisites: Foundations of Art
Duration: 2 Semesters Credit: 1.0
3D Visual Art is an intermediate course which allows students to make further artistic inquiries and in-depth exploration into 3D forms of artmaking. This course builds off the knowledge gained in Foundations of Art. Such explorations will be within processes, themes/concepts, and skills that will prepare students for AP 3D Art & Design, AP Drawing, or Open Studio. Student learning will be explored through creative-making processes and development such as research, classroom demonstrations. 3D Visual Art students will work with a variety of sculptural materials and techniques. 3D Visual Art is a safe space where students are encouraged to be curious, ask questions, experiment, take risks, and creatively problem solve as artists and engaged lifelong learners.

Open Studio

Prerequisites: Two years of Art and Teacher Recommendation

Duration: 2 Semesters Credit: 1.0

Open Studio is a course where students are able to independently develop a portfolio. Open Studio students as practitioners in art marking get to explore ideas, materials, and processes that are of interest to them. Open Studio students will be able to develop studio habits such as perseverance and self-expression, life-long attributes. This course will give students an opportunity to develop a breadth of artworks that could work towards requirements for university art programs. Open Studio is a safe space where students are encouraged to be curious, ask questions, experiment, take risks, and creatively problem solve as artists and engaged lifelong learners.

AP Art & Design

Prerequisites: Two years of Art & Teacher Recommendation

Duration: 2 Semesters Credit: 1.0

The AP Art & Design course at Concordia offers instruction in the three portfolios: 2D Drawing, 2D Design and 3D Design. The portfolios each share a basic, two-section structure called the Sustained Investigation and the Selected Works of quality and finish. The primary focus is the development and completion of an inquiry-based theme in which the students demonstrate a prolonged depth of investigation and a process of discovery, exhibiting a synthesis of form, technique and content and applying a serious grounding in visual principles and material techniques throughout the course. The Sustained Investigation section requires the completion of 15 slides that are comprised of original artwork, process and progress, experimentation and experience that truly supports the student's artistic journey. The Selected Works section holds 5 original artworks that best exhibit the student's synthesis of form, technique and content.

The AP Art & Design portfolios are designed for the student who is seriously interested in the practical experience of art or attending art school. Students are required to submit one completed portfolio of choice for AP Central Board evaluation at the end of this course of study. As faculty permission is required, students are requested to submit 3 works of art to the designated Concordia AP Art & Design teacher for review before permission to enroll is granted.

AP Art History (#)

Prerequisite: Teacher permission

Duration: 2 Semesters Credit: 1.0

The AP Art History course at Concordia is an introductory college level course in art history preparing students for the AP Art History Exam. The syllabus presents a chronological survey of the development of painting, sculpture and architecture from the ancient world through to the 21st century. Students learn to understand works of art within their historical context

by examining issues such as politics, religion, patronage, genre, function and ethnicity. Students continue to develop their ability to observe visual analysis in works of art. The course supplies students with the knowledge and skills to understand works of art through both contextual and visual analysis. Twenty percent of the course content is devoted to art beyond the European tradition.

AL Graphic Design

Prerequisites: Foundations of Art and 2D or 3D Art & Teacher Recommendation

Duration: 2 Semesters Credit: 1.0

This course introduces high school students to the principles and practices of graphic design through hands-on, real-world projects. Students will learn to use design software, develop their creativity, and gain practical skills for creating a wide range of visual materials, from posters to digital media. Additionally, students will have the opportunity to support the school community by applying their graphic design expertise to create engaging visuals for school events, clubs, and initiatives, fostering a sense of service and responsibility.

AL Fashion, Textiles, and Construction

Prerequisites: Foundations of Art & Teacher Recommendation

Duration: 2 Semesters Credit: 1.0

AL Fashion, Textiles & Construction Design explores fashion design, textile construction for interiors, and textile design. Through this course, students will use principles and techniques involved in working with fashion design, fabric design, and textile construction to create designs from student's ideas. Students will explore different surface designs like screen printing, fabric dying, weaving, clothing construction, fashion design, textile design for interiors, and innovative practices like “smart fashion” that utilizes gemma Arduino technology. By the end of this course, students will have a solid foundation for how designers create and use textiles from fashion to interiors through an innovative lens.

DRAMA

Theatre Tech, Design, and Stagecraft

Prerequisites: None

Duration: Semester Credit: 0.5

This course immerses students in the behind-the-scenes world of theatre production. Students will learn essential technical theatre skills, including set construction, lighting design, sound operation, prop creation, and makeup and costume design. Emphasis will be placed on safety, teamwork, and creative problem-solving as students gain hands-on experience working on and supporting our school's productions. Whether interested in design, stage management, or backstage crew, students will develop practical skills that bring performances to life. No prior experience is required—just a willingness to collaborate and explore the technical side of theatre.

Foundations of Theatre

Prerequisites: None

Duration: Semeste r Credit 0.5 (non-repeatable)

This semester-long course focuses on developing a foundational understanding of the core attributes of theatre arts: cultivating group and individual skills in acting, design, and production, practice strategies to communicate ideas and feelings to an audience. Students will be introduced to foundational elements of theatrical performance related to acting, physical theatre, and ensemble work. Through practical and theoretical study, students will discover various performance possibilities of a text and other stimuli and devise dramatic material of their own. They will develop performance skills to grow as actors, ensemble cast members, and performers.

Acting and Script Work

Prerequisite: Foundations of Theatre (exception for juniors and seniors who have had roles in 3 HS performances (plays or musicals and director recommendation)

Duration: 2 Semesters Credit 1.0

This year-long course focuses on developing acting techniques through scripted work, including monologues, scene study, and one act plays. Students will explore character development, text analysis, vocal and physical expression, and various acting methods such as Stanislavski, Meisner, and Uta Hagen in addition to learning skills and techniques for developing makeup, set, and costume design. Emphasis will be placed on rehearsing and performing scenes from classic and contemporary plays, as well as preparing for auditions. Through collaborative work and individualized coaching, students will refine their craft and build confidence as actors on stage. The course culminates in showcase performances demonstrating their growth as actors.

Devised Theatre and Original Performance

Prerequisite: Foundations of Theatre (exception for juniors and seniors who have had roles in 3 HS performances (plays or musicals and director recommendation)

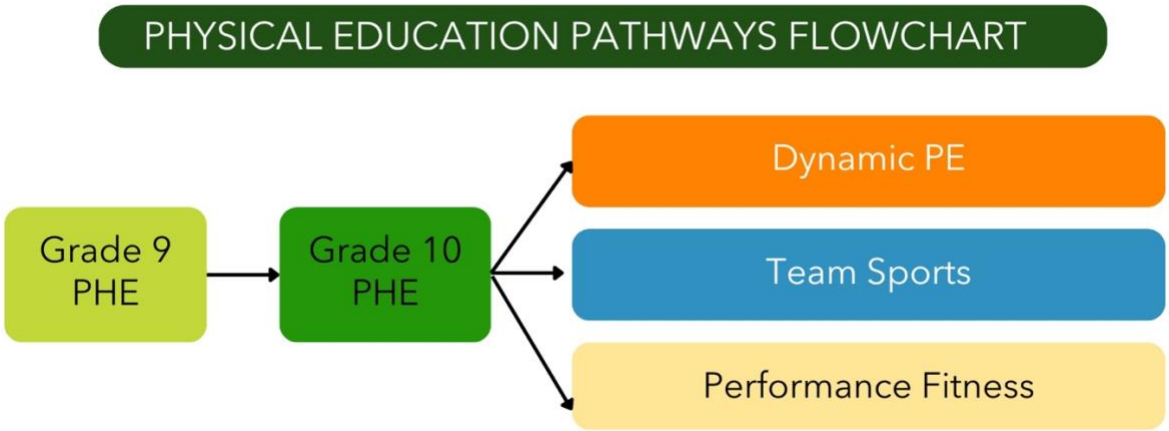
Duration: 2 Semesters Credit 1.0

This year-long course explores the art of creating original theatre through ensemble collaboration, movement/physical theatre, improvisation, and various strategies for storytelling. Students will experiment with various devised theatre forms, including physical theatre, verbatim/documentary theatre, site-specific performance, and Theatre of the Oppressed. Through a process of research, improvisation, and exploration, students will develop original works that challenge traditional narrative structures and engage audiences in innovative ways. The course culminates in student-created performances that reflect personal, social, and artistic themes.

Physical Education & Health

Designed to provide opportunities for students to develop healthy lifelong habits, our PE and health curriculum addresses the physical and emotional aspects of the whole child. Concordia offers fitness-based curriculum giving each student the skill set needed to pursue lifelong fitness and sport.
Two credits in Physical Education are required for graduation and 1 semester credit of Health are required for graduation.

G9-12 P.E. PATHWAYS FLOWCHART



Grade 9 PHE
Duration: 2 Semesters Credit: 0.5 PHE and 0.5 Health
This yearlong PHE course will continue to engage students in and educate the soul. Students will begin building their physical and wellness footprints while learning essential concepts in the areas of fitness, cooperative games, and areas of health including nutrition, social and mental health. A healthy body and a sound mind lead to improved performance and healthier lifestyle.

Grade 10 PHE
Duration: 1 Semester Credit: 0.5
The high school physical education program at Concordia provides students with an understanding and application of games and fitness. Grade 10 students will learn intermediate and advanced game strategies and sports skills. In addition, students will be reflective individuals and use a social responsibility model rubric. Throughout the semester, students will refine goal-setting skills and plans to change themselves in both physical and

mental dimensions effectively. Students will be offered a wide range of sports and physical activities to participate in covering all fundamental movement skills such as running, throwing, jumping, catching and kicking. In addition to maintaining healthy fitness levels, our program provides instruction in life hygiene, and nutrition.

Dynamic PE 11/12 (*)
Prerequisites: Has not taken this course.
Duration: 1 semester Credit: 0.5
Students will enjoy this dynamic journey that engages them in many relevant topics with the emphasis on informed decision making. Some topics included are: cardiovascular training, nutrition concepts, strength training, personal wellness, stress management, substance abuse, and safety and first aid.

Team Sports 11/12 (*)
Prerequisites: Has not taken this course.
Duration: 1 semester Credit: 0.5
Students will be focusing on the skills, strategies, and spirit of various team sports. This course will dive into the historical evolution and dynamic issues of sports, offering students a comprehensive understanding of their development and societal impact. Through active participation, students will hone their athletic abilities while learning about teamwork and sportsmanship. A unique feature of the course is the exploration and debating issues in sport, fostering critical thinking and ethical considerations. Team Sports is ideal for students seeking to combine physical education with engaging discussions on the broader aspects of sports and their role in society.

Performance Fitness 11/12 (*)
Prerequisites: Has not taken this course.
Duration: 1 Semester Credit: 0.5
Performance Fitness is designed for students who want to focus on fitness center training and learn the foundational and advanced aspects of creating effective training programs. This course emphasizes personal fitness development by guiding students through principles of strength training, cardiovascular conditioning, and flexibility. Students will learn to design, implement, and refine individualized training programs tailored to their goals, equipping them with the knowledge and skills needed to maintain fitness beyond high school. Nutrition is a key component of the course, with students exploring how diet supports training and overall wellness. By tracking progress and reflecting on their journey, students gain the confidence and expertise to continue improving their fitness throughout their lives.

ELECTIVE COURSES

Cinema Studies: Our World Through a Lens
Prerequisites: Has not taken this course.
Duration: 1 semester Credit: 0.5
Embark on a captivating journey through the world of cinema in this semester-long course that seamlessly blends theory and practice. Cinematic exploration offers students a comprehensive understanding of the elements that constitute the art of filmmaking. Through in-depth studies of narrative structures, cinematography, sound design, art direction and editing techniques, participants will gain critical insights into the language of cinema. The course goes beyond theoretical analysis by providing hands-on experiences in creating films. Students will have the opportunity to apply their knowledge, from script development to production and editing, culminating in the creation of a short film. This immersive approach will foster a deeper appreciation for the intricacies of cinematic storytelling and equips students with practical skills for expressing their creative visions through the medium of film. Join us on this cinematic journey, where theory meets practice, and imagination knows no bounds.

Global Online Academy Courses

Global Online Academy (GOA), an international consortium made up of leading independent schools, to provide high-quality online learning experiences for our students and teachers. GOA offers a diverse range of online courses and is a great way for Concordia high school students to prepare for the future, pursue their passions, and discover new subjects which spark their interest outside of courses Concordia offers on campus. Colleges and universities also take notice when they see a GOA course on Concordia transcripts. GOA courses are guided by expert teachers, many from GOA member schools and Concordia students will have an opportunity to collaborate with classmates around the globe through frequent, mostly asynchronous discussion and collaboration. These courses focus on relevant, hands-on ideas and coursework, similar to Honors level or Adavanced Placement (AP) in terms of expectations and rigor.

The mission of Global Online Academy (GOA) is to reimagine learning to enable students to thrive in a globally networked society. GOA provides a positive, interactive, and intellectually rigorous environment for students to learn. We offer courses that connect students to topics they care about, and the opportunity to learn alongside a global network of peers as passionate and curious as they are.

GOA has identified six core competencies - the specific set of skills and habits of learning - that students develop in practical, hands-on ways, no matter which GOA course they take:

1. Collaborate with people who don't share your location.
2. Communicate and empathize with people who have perspectives different from your own.
3. Curate and create content relevant to real-world issues.
4. Reflect on and take responsibility for your learning and that of others.
5. Organize your time and tasks to learn independently.
6. Leverage digital tools to support and show your learning.

GOA Study Hall in Schedule – All students taking a GOA course during the school year will have a GOA study hall in addition to their regular study hall. The GOA study hall is provided for students to complete their GOA studies.

During the school year most GOA courses are open to Juniors and Seniors. World Language Courses (Arabic and Japanese) are open to students in grades 9 to 12.

GOA courses during the school year are for credit, included on Concordia high school transcripts, included in GPA calculation.

GOA courses during summer terms are included in GPA calculation and on Concordia high school transcripts for elective credit, unless it is a course that is offered also on campus.

Course syllabi are available on the GOA website (globalonlineacademy.org).

Concordia Policies Regarding Global Online Academy Courses

Recommendation Required

Enrollment in Global Online Academy courses that will appear on a student's Concordia high school transcript requires the recommendation and approval of the Concordia GOA Site Director. The Site Director will evaluate the student's academic background, motivation, and ability to succeed in an online course before making a recommendation.

Summer Course Payment

Summer GOA courses are paid for by families. GOA courses during the school year are included in regular tuition and no extra payment is required unless a course is being taken a second time (as a result of failing it the first time).

GOA Course Drop Policy

At Concordia, the policy for adding or dropping Global Online Academy (GOA) courses differs from the GOA policy itself. It's important to be aware that GOA permits a student to drop a course at any time during the term (fees imposed after the first drop date). In contrast, Concordia students are not permitted to drop a course after the first drop deadline for that term, typically approximately 9-10 days after the course begins. If a Concordia student does not drop the GOA course before the "GOA last day to drop with no penalty" deadline and fails to complete the course, they will receive an "F" grade (or 59%) for the GOA course on their Concordia transcript.

GOA Incomplete Courses & Credit Recovery

If a student does not complete their Global Online Academy (GOA) course and receives an "Incomplete" grade due to insufficient evidence provided by the student, an "F" (or 59%) will be recorded on their Concordia high school transcript. However, the student may be able to replace the failing grade with a passing grade by retaking the same course under the following conditions:

- If the course is offered by GOA in a future term while the student is enrolled at Concordia
- If the GOA site director recommends that the student retake the course
- If the student successfully passes the course the second time
- If the student/family agrees to pay for the course when retaking it
- In order to replace the failing grade, all of these conditions must be met

Please note that this means a senior who fails a GOA course will not have an opportunity to recover the course credit by retaking the course.

GOA Courses Summer 24 (June 17 to August 2)	
– Abnormal Psychology	– Cybersecurity
– Architecture	– Digital Photography

– Business Problem Solving – Computer Science II: Analyzing Data with Python – Computer Science II: Game Design & Development – Computer Science II: Java – Creative Nonfiction Writing	– Genocide & Human Rights – Introduction to Artificial Intelligence – Introduction to Branding & Marketing – Introduction to Psychology – Investing I – Medical Problem Solving I – Personal Finance

24-25 School Year – Semester 1	24-25 School Year – Semester 2
– Abnormal Psychology – Architecture – Applying Philosophy to Global Issues – Architecture – Bioethics – Business Problem Solving – Climate Action & Sustainability – Creative Nonfiction Writing – Cybersecurity – Data Visualization – Developmental Psychology – Entrepreneurship in a Global Context – Filmmaking – Game Theory – Genocide & Human Rights – Global Health – Graphic Design – Introduction to Artificial Intelligence – Introduction to Psychology – Investing I – Medical Problem Solving I – Medical Problem Solving II – Neuropsychology – Number Theory – Personal Finance – Positive Psychology – Prisons & Criminal Justice Systems – Race & Society	– Abnormal Psychology – Architecture – Arts Entrepreneurship – Bioethics – Business Problem Solving – Capitalism: Past, Present & Future – Computer Science II: Analyzing Data with Python – Computer Science II: Game Design & Development – Computer Science II: Java – Cybersecurity – Developmental Psychology – Digital Photography – Discourse Across Difference – Entrepreneurship in a Global Context – Game Theory – Gender & Society – Graphic Design – Introduction to Artificial Intelligence – Introduction to Blockchain & Cryptocurrency – Introduction to Psychology – Investing I – Investing II – Medical Problem Solving I – Medical Problem Solving II – Neuropsychology

	– Personal Finance – Prisons & Criminal Justice Systems

Abnormal Psychology

This course provides students with a general introduction to the field of abnormal psychology from a western perspective while exploring the cultural assumptions within the field. Students examine the biopsychosocial aspects of what society considers abnormal while developing an understanding of the stigma often associated with psychological disorders.

Through book study, videos, article reviews, and discussions, students consider how our increasingly global world influences mental health in diverse settings. In learning about the different areas of western abnormal psychology, students study the symptoms, diagnoses, and responses to several specific disorders such as anxiety, depression, eating disorders, or schizophrenia.

Students develop an understanding of how challenging it can be to define "normal" as they begin to empathize with those struggling with mental distress. Throughout the course, students are encouraged to attend to their own mental well-being. The course culminates in an independent project where students showcase their learning with the goal of making an impact in their local communities.

Applying Philosophy To Global Issues

This is an applied philosophy course that connects pressing contemporary issues with broad-range philosophical ideas and controversies, drawn from multiple traditions and many centuries. Students use ideas from influential philosophers to examine how thinkers have applied reason successfully, and unsuccessfully, to many social and political issues across the world.

In addition to introducing students to the work of philosophers as diverse as Socrates, Confucius, and Immanuel Kant, this course also aims to be richly interdisciplinary, incorporating models and methods from diverse fields including history, journalism, literary criticism, and media studies. Students learn to develop their own philosophy and then apply it to the ideological debates that surround efforts to improve their local and global communities.

Arabic Language Through Culture I

This course (or its equivalent) is a prerequisite to Arabic II and III at GOA.

In addition to bringing Arabic popular culture to life, this course introduces students to the Arabic writing system in 12 weeks to communicate in spontaneous spoken conversations on everyday topics, including personal introductions, families, food, lifestyle, preferences, celebrations, history, art, music, social media, and environment.

This yearlong course focuses on Modern Standard Arabic (MSA) and some of the spoken dialects of the Levant, Egypt, and North Africa. With an emphasis on Arabic culture, students

learn commonly used expressions and phrases to develop their skills in listening, reading, writing, forming grammatically correct structured sentences, and most importantly, conversation. This is accomplished through synchronous and asynchronous assignments, face-to-face conversation sessions with the instructor and a group of peers, instructional videos, discussions about culture, and collaborations on group projects with students from around the globe.

Since Arabic is becoming one of the most functional languages in the world, especially in the areas of commerce, business, and trade, students participating in this course can avail themselves of the opportunity to learn the language in a highly stimulating and rich cultural context.

Arabic Language Through Culture II

Prerequisite: Arabic Language Through Culture I or permission from the instructor

This course (or its equivalent) is a prerequisite to Arabic III at GOA.

Arabic II students have taken one year of Arabic Language Through Culture or have demonstrated novice proficiency where they are able to communicate in spontaneous spoken conversations on familiar topics, including food, weather, and hobbies, using a variety of practiced or memorized words, phrases, simple sentences, and questions.

Students review the first three units of the book Al-Kitaab as well as most of the Arabic foundations that they took in the previous year, starting with the alphabet and ending with how to write a sentence and even a paragraph. Students also work on other skills such as reading and speaking through using different real-life situations that they would need to use Arabic in, most importantly the conversation.

They also work on building students' vocabulary bank in many topics such as introducing themselves, ordering food, describing the weather, and talking about clothes. Moreover, they discuss travel and trips, their country, health, and plans and goals for the future. And finally, they talk about how to tell a story.

This yearlong course focuses on Modern Standard Arabic (MSA) and some of the spoken dialects of the Levant and Egypt. With an emphasis on Arabic culture, and engaging with group work with their peers from around the globe. They have the opportunity to finish units 4-8 from AlKitaab and to learn the language in highly interactive activities and cultural contexts.

Arabic Language Through Culture III

Prerequisite: Arabic Language Through Culture I and II or permission from the instructor

Students in Arabic III have demonstrated intermediate interpersonal proficiency in Arabic (MSA or a dialect) through two years in Arabic Language Through Culture or other coursework, and have demonstrated an ability to work online independently and reliably with instructors and peers in Arabic Language Through Culture or another GOA class.

Students in Arabic III have opportunities to work on the intermediate high levels and the advanced level to communicate in spontaneous spoken conversations on everyday topics on a higher level. This course focuses mainly on units 8-13 from Al-Kitaab. They study Modern Standard Arabic (MSA) and some of the spoken dialects of the Levant and Egypt, most importantly conversation. They are also able to design their own venue, talk about the food and nutrition, the weather, and the climate, and discuss stories in the past and present.
This is accomplished through synchronous and asynchronous assignments, conversation sessions with the instructor and a group of peers, instructional videos, discussions about culture, and collaborations on group projects with students from around the globe. In reading, listening, speaking, and writing, students curate, share, and practice materials may include TV commercials, news, movies, children's stories, online websites, and Arabic songs and music. Finally, they learn the language in highly interactive activities and cultural contexts.

Architecture
In this course, students build an understanding of and apply skills in various aspects of architectural design. While gaining key insights into the roles of architectural analysis, materials, 3D design, and spatial awareness, students develop proficiency in architectural visual communication.
The course begins by learning the basic elements of architectural design to help analyze and understand architectural solutions. Through digital and physical media, students develop an understanding of the impact building materials have on design. At each stage of the course, students interact with peers from around the globe, learning and sharing how changes in materials, technology, and construction techniques lead to the evolution of contemporary architectural style and visual culture.
The course culminates with a final project in which each aspiring architect has the opportunity to work toward a personal presentation for the GOA Catalyst Exhibition. Students, through a variety of outcomes, present an architectural intervention that they have proposed as a solution to an identified need, one emanating from or focused within their own community. Throughout the course, students refer to the design process and use techniques to track, reflect, and evidence their understanding of architecture.

Arts Entrepreneurship
In this course, aspiring visual artists, designers, filmmakers, musicians, and other creatives learn how to find success in the dynamic fields of their choosing. Students learn about arts careers and organizations by attending virtual events and interviewing art practitioners, entrepreneurs, and administrators.
Beyond exploring trajectories for improving their crafts, students build skills in networking and personal branding while examining case studies of a variety of artistic ventures — some highly successful and some with teachable flaws. Using real-world examples of professional

and emerging creatives and arts organizations, students gain a better understanding of the passion and dedication it takes to have a successful creative career.

Bioethics

Ethics is the study of what one should do as an individual and as a member of society. Bioethics refers to the subset of this field that focuses on medicine, public health, and the life sciences. In this course, students explore contemporary, pressing issues in bioethics, including the "right to die," policies around vaccination and organ transplantation, competence to consent to care, human experimentation and animal research, and genetic technologies.

Through reading, writing, research, and discussion, students explore the fundamental concepts and questions in bioethics, deepen their understanding of biological concepts, strengthen their critical-reasoning skills, and learn to engage in respectful dialogue with people whose views may differ from their own. The course culminates with a student-driven exploration into a particular bioethical issue, recognizing the unique role that bioethics plays within the field of ethics.

Business Problem Solving

How could climate change disrupt your production and supply chains or impact your consumer markets? Will tariffs help or hurt your business? How embedded is social media in your marketing plan? Is your company vulnerable to cybercrime? What 21st-century skills are you cultivating in your leadership team?

Students in this course tackle real-world problems facing businesses large and small in today's fast-changing global marketplace where radical reinvention is on the minds of many business leaders. Students work collaboratively and independently on case studies, exploring business issues through varied lenses including operations, marketing, human capital, finance and risk management as well as sustainability. As they are introduced to the concepts and practices of business, students identify, analyze, and propose solutions to business problems, engaging in research of traditional and emerging industries, from established multinationals to startups.

Capitalism: Past, Present & Future

In some circles, capitalism has been blamed for most of society's ills. In others, it has been credited with the grandest achievements in human history. In this course, students examine advocates from both circles, looking closely at the components of capitalism — and other systems of economic and social control — to decide what they think. As students build their own philosophies around capitalism, they work collaboratively and independently on case studies, exploring examples of capitalism around the world and in the world around us.

Throughout the course, students immerse themselves in the history of various forms of capitalism, learning the specific components of capitalism. Students investigate how capitalism has impacted social, political, and economic systems around the world.

The final project requires students to pull from historical and modern case studies to present a coherent portfolio of their thinking. Students also create a proposal for articulating shifts as we look to the future of capitalism.

Climate Change & Sustainability

The course explores the critical issues of climate change and its profound impacts through the lenses of equity and sustainability. In an ever-changing world, we'll delve into the interconnected challenges of climate justice, agriculture, wildfires, renewable energy courses, sea level rise, and the consequences of invasive species. Students will engage in comprehensive studies to interrogate the causes and effects of climate change, investigate public policy debates, and, most importantly, examine how these issues affect the diverse populations of our planet through hands-on activities. The course culminates with GOA's Catalyst Exhibition, as students share projects to spark change in local communities through well-informed activism.

Computer Science II: Analyzing Data with Python

Prerequisite: Computer Science I: Computational Thinking or its equivalent

In this course, students utilize the Python programming language to read, analyze, and visualize data. The course emphasizes using real-world datasets, which are often large, messy, and inconsistent. Because of the powerful data structures and clear syntax of Python, it is one of the most widely used programming languages in scientific computing.

Students explore the multitude of practical applications of Python in fields like biology, engineering, and statistics.

Computer Science II: Game Design & Development

Prerequisite: Computer Science I: Computational Thinking or its equivalent

In this course, students design and develop games through hands-on practice. Comprised of a series of "game jams," the course asks students to solve problems and create content, developing the design and technical skills necessary to build their own games.

The first month of the course is dedicated to understanding game design through game designer Jesse Schell's "lenses": different ways of looking at the same problem and answering questions that provide direction and refinement of a game's theme and structure. During this time, students also learn how to use Unity, a professional game development tool, and become familiar with the methodologies of constructing a game using such assets as graphics, sounds, and effects, and controlling events and behavior within the game using the C# programming language.

Throughout the remainder of the course, students work in teams to brainstorm and develop new games in response to a theme or challenge. Students develop their skills in communication, project and time management, and creative problem-solving while focusing on different aspects of asset creation, design, and coding.

Computer Science II: Java

Prerequisite: Computer Science I: Computational Thinking or its equivalent

This course teaches students how to write programs in the Java programming language. Java is the backbone of many web applications, especially eCommerce and government sites. It is also the foundational code of the Android operating system and many tools of the financial sector.

Students learn the major syntactical elements of the Java language through object-oriented design. The emphasis in the course is on creating intelligent systems through the fundamentals of Computer Science. Students write working programs through short lab assignments and more extended projects that incorporate graphics and animation.

Cybersecurity

There is no computer science prerequisite for this course, though students with some background will certainly find avenues to flex their knowledge.

Cyber criminals leverage technology and human behavior to attack our online security. This course explores the fundamentals of and vulnerabilities in the design of computers, networks, and the internet. Course content includes the basics of computer components, connectivity, virtualization, and hardening.

Students learn about network design, Domain Name Services, and TCP/IP. They will understand switching, routing, and access control for internet devices, and how denial of service, spoofing, and flood attacks work. Basic programming introduced in the course will inform hashing strategies, while an introduction to ciphers and cryptography will show how shared-key encryption works for HTTPS and TLS traffic.

Students also explore the fundamentals of data forensics and incident response protocols. The course includes analysis of current threats and best-practice modeling for cyber defense, including password complexity, security, management, breach analysis, and hash cracking. Computational thinking and programming skills developed in this course will help students solve a variety of cybersecurity issues.

Data Visualization

There is no computer science, math, or statistics prerequisite for this course, though students with backgrounds in those areas will certainly find avenues to flex their knowledge in this course.

Through today's fog of overwhelming data, visualizations provide meaning. This course trains students to collect, organize, interpret, and communicate massive amounts of information. Students wrangle data into spreadsheets, learning the basic ways professionals translate information into comprehensible formats. They explore charts, distinguishing between effective and misleading visualizations. Employing principles from information graphics, graphic design, visual art, and cognitive science, students create their own stunning and

informative visualizations using Datawrapper, Tableau Public, and/or Python. From spreadsheets to graphics, students in this course practice the crucial skills of using data to decide, inform, and convince.

Developmental Psychology

Over a few short years, most human beings grow from infants who are not even able to hold up their heads to become walking, talking, thinking people who are able to communicate using language, to understand complexities, to solve problems, and to engage in moral reasoning. This course is an introduction to the fascinating study of human growth and development focusing on the significant changes that occur physically, emotionally, cognitively, and socially from birth through adolescence.

Students consider the big questions of heredity versus environment, stability versus change, and continuity versus discrete stages of change as they investigate language acquisition, sensorimotor development, thinking and learning, and personality and emotions. Through readings, observations, case studies, and application activities, students examine development from the perspectives of major theorists in the field from both Western and nonWestern traditions.

Digital Photography

Prerequisite: Students must have daily access to a DSLR camera.

In an era where everyone has become a photographer obsessed with documenting most aspects of life, we swim in a sea of images posted on Instagram, Facebook, Snapchat, Pinterest, and other digital media. To that end, why is learning how to use a digital camera important and what does taking a powerful and persuasive photo with a 35mm digital single lens reflex (DSLR) camera require?

Digital Photography explores this question in a variety of ways, beginning with the technical aspects of using and taking advantage of a powerful camera and then moving to a host of creative questions and opportunities. Technical topics such as aperture, shutter, white balance, and resolution get ample coverage in the first half of the course, yet each is pursued with the goal of enabling students to leverage the possibilities that come with manual image capture. Once confident about technical basics, students apply their skills when pursuing creative questions such as how to understand and use light, how to consider composition, and how to take compelling portraits.

Throughout the course, students tackle projects that enable sharing their local and diverse settings, ideally creating global perspectives through doing so. Additionally, students interact with each other often through critique sessions and collaborative exploration of the work of many noteworthy professional photographers whose images serve to inspire and suggest the diverse ways that photography tells visual stories.

Shape Discourse Across Difference

Our increasingly interconnected, globally networked society presents us with complex social, political, and ethical dilemmas. This course equips students with strategies for engaging such issues through constructive dialogue focused on building understanding across differences. Through structured conversations, debate, rhetorical analysis, and guided reflection, students will gain skills for having difficult yet thoughtful dialogues. They will learn how to carefully evaluate multiple perspectives, make evidence-based claims, ask insightful questions, take others' viewpoints into account, and seek common ground. Specific topics examined may include technology's impact on privacy, environmental sustainability, social justice reform, and other current events that are sure to emerge! By practicing perspective-taking, identifying shared goals, and finding compromise, students will be able to have productive conversations even when they disagree. The course aims to foster civil discourse, strengthen critical thinking abilities, and build understanding across diverse perspectives. Students will emerge better prepared for responsible civic participation and prepared to thrive in a globally networked society.

Entrepreneurship In A Global Context

How does an entrepreneur think? What skills must entrepreneurs possess to remain competitive and relevant? What are some of the strategies that entrepreneurs apply to solve problems? In this experiential course, students develop an understanding of entrepreneurship in today's global market; employ innovation, design, and creative solutions for building a viable business model; and learn to develop, refine, and pitch a new startup.

Units of study include business model canvas, customer development vs. design thinking, value proposition, customer segments, iterations and pivots, brand strategy and channels, and funding sources. Students use the business model canvas as a roadmap to building and developing their own team startup, a process that requires hypothesis testing, customer research conducted in hometown markets, product design, product iterations, and entrepreneur interviews.

An online startup pitch by the student team to an entrepreneurial advisory committee is the culminating assessment. Additional student work includes research, journaling, interviews, peer collaboration, and a case study involving real-world consulting work for a current business.

Filmmaking

Prerequisite: Students must have access to an HD video camera, tripod or other stabilizing equipment, and editing software such as iMovie, Premiere Pro, etc

This course is for students interested in developing their skills as filmmakers and creative problem-solvers. It is also a forum for screening the work of their peers and providing constructive feedback for revisions and future projects, while helping develop critical-thinking skills.

The course works from a set of specific exercises based on self-directed research and culminates in a series of short experimental films that challenge students on both a technical and creative level. Throughout, the course increasingly focuses on helping students express their personal outlooks and develop unique styles as filmmakers. Students review and reference short films online and discuss how they might find inspiration and apply what they find to their own works.

Game Theory

In this course, students explore a branch of mathematics known as game theory, which uses mathematical models to inform decision making. There are many applications to everyday dilemmas and conflicts, many of which can be treated as mathematical games.

Students consider significant global events from fields like diplomacy, political science, anthropology, philosophy, economics, and popular culture. They examine models of world conflicts and scheduling of professional athletic contests. Specific topics include two-person zero-sum games, two-person non-zerosum games, sequential games, multiplayer games, linear optimization, and voting theory.

Gender & Society

This course uses the concept of gender to examine a range of topics and disciplines that include feminism, gay and lesbian studies, women's studies, popular culture, and politics. Throughout the course, students examine the intersection of gender with other social identifiers: class, race, sexual orientation, culture, and ethnicity. Students read about, write about, and discuss gender issues as they simultaneously reflect on the ways that gender has manifested in and influenced their lives.

Genocide & Human Rights

Students in this course study several of the major 20thcentury genocides (Armenian, the Holocaust, Cambodian, and Rwandan), analyze the role of the international community in responding to and preventing further genocide (with particular attention to the Nuremberg tribunals), and examine current human rights crises around the world.

Students read primary and secondary sources, participate in both synchronous and asynchronous discussions with classmates, write brief papers, read short novels, watch documentaries, and develop a human rights report card website about a nation of their choice.

Global Health

What makes people sick? What social and political factors lead to the health disparities we see both within our own communities and on a global scale? What are the biggest challenges in global health and how might they be met? Using an interdisciplinary approach to address these questions, this course improves students' health literacy through an examination of the most significant public health challenges facing today's global population.

Topics addressed include the biology of infectious disease, the statistics and quantitative measures associated with health issues, the social determinants of health, and the role of organizations (public and private) in shaping the landscape of global health policy. Throughout the course, students use illness as a lens through which to critically examine such social issues as poverty, gender, and race.
Student work includes analytical writing, research and curating sources around particular topics, readings and discussions exploring a variety of sources, and online presentations created both on their own and with peers

Graphic Design
What makes a message persuasive and compelling? What helps audiences and viewers sort and make sense of information? This course explores the relationship between information and influence from a graphic design perspective. Using an integrated case study and designbased approach, this course aims to deepen students' design, visual, and information literacies.
Students are empowered to design and prototype passiondriven communication projects. Topics include principles of design and visual communication, infographics, digital search skills, networks and social media, persuasion and storytelling with multimedia, and social activism on the internet. Student work includes individual and collaborative group projects, graphic design, content curation, analytical and creative writing, peer review and critiques, and online presentations.

Introduction to Artificial Intelligence
Aspects of artificial intelligence permeate our lives and the algorithms power your favorite apps. How much do you really know about how AI works or how it is changing the world around us?
This course explores the history of research into artificial general intelligence and the subsequent focus on the subfields of narrow AI: neural networks, machine learning and expert systems, deep learning, natural language processing, and machine vision and facial recognition. Students also learn how AI training datasets cause bias and focus on the ethics and principles of responsible AI: fairness, transparency and explainability, humancenteredness, and privacy and security.

Introduction to Blockchain & Cryptocurrency
Much attention has been brought to the cryptocurrency space by the meteoric rise in the valuation of Bitcoin and other cryptocurrencies. More recently, meme tokens have also grabbed the spotlight. When thinking about cryptocurrency, there is much more to consider than just market capitalization or coins named after canines.
Introduction to Blockchain & Cryptocurrency is an entry level course for anyone excited by the space. This course explores how we arrived at the place we are now, and what the current

and possible applications of crypto are. Students explore how markets in crypto operate, where they've received practical application, and where the space may head in the future through the lenses of creators, consumers, and governments. In addition, students take a deeper look at blockchain, the underlying technology that powers cryptocurrencies, and its many, far-reaching implications for the future of government, business, the arts, and more.
Each lens represents a different way to view the complex and interrelated causes and outcomes of the changing crypto landscape. Using a variety of technologies and activities, students work individually and with peers to evaluate each lens. Students then analyze and explore how these technologies may shape and disrupt the future not only of the crypto space but of many current and future industries.

Introduction to Psychology

What does it mean to think like a psychologist? In Introduction to Psychology, students explore three central psychological perspectives — the behavioral, the cognitive, and the sociocultural — in order to develop a multifaceted understanding of what thinking like a psychologist encompasses. The additional question of "How do psychologists put what they know into practice?" informs study of the research methods in psychology, the ethics surrounding them, and the application of those methods to practice.
During the first five units of the course, students gather essential information that they apply during a group project on the unique characteristics of adolescent psychology. Students similarly envision a case study on depression, which enables application of understandings from the first five units. The course concludes with a unit on positive psychology, which features current positive psychology research on living mentally healthy lives.
Throughout the course, students collaborate on a variety of activities and assessments, which often enable learning about each other's unique perspectives, while building their research and critical-thinking skills in service of understanding the complex field of psychology.

Investing I

This course is a prerequisite to Investing II at GOA.
In this course, students simulate the work of investors by working with the tools, theories, and decision-making practices that define smart investment. Students explore concepts in finance and apply them to investment decisions in three primary contexts: portfolio management, venture capital, and social investing.
After an introduction to theories about valuation and risk management, students simulate scenarios in which they must make decisions to grow an investment portfolio. They manage investments in stocks, bonds, and options to learn a range of strategies for increasing the value of their portfolios. In the second unit, students take the perspective of venture capital investors, analyzing startup companies and predicting their value before they become public. In the third unit, students examine case studies of investment funds that apply the tools of finance to power social change.

Throughout the course, students learn from experts who have experience in identifying value and managing risk in global markets. They develop their own ideas about methods for weighing financial risks and benefits and leave this course not just with a simulated portfolio of investments, but the skills necessary to manage portfolios in the future.

Investing II

Prerequisite: Investing I

In this course, students expand their knowledge of practices that define smart investment. They explore concepts in finance and apply them to investment decisions in four primary contexts: fixed-income investments, foreign exchange and crypto, commodities, and real estate. After an introduction to theories about behavioral finance, students simulate scenarios in which they must make decisions to add to their portfolio of equities.

In the first unit, they learn how fixed-income assets like bonds fit into a larger portfolio to hedge risk in their portfolios. In the second unit, students examine forex trading and the cryptocurrency markets, a riskier and more volatile investment vehicle. In the third unit, students examine how commodities can be a part of a larger portfolio, but also how commodity prices might affect the larger economy. Finally, in the fourth unit, students learn about the array of strategies in real estate investing.

Throughout the course, students learn from experts who have experience in identifying value and managing risk in global markets. They develop their own ideas about methods for taking calculated financial risks and build on their understanding from Investing I. They leave this course with a more nuanced view of their overall portfolio and the skills necessary to manage risk in the future.

Japanese Language Through Culture I

This course (or its equivalent) is a prerequisite to Japanese II and III at GOA.

This full-year course is a unique combination of Japanese culture and language, weaving cultural comparison with the study of basic Japanese language and grammar. While examining various cultural topics such as literature, art, lifestyle, and economy, students learn the basics of the Japanese writing system (Hiragana and Katakana), grammar, and vocabulary. Through varied synchronous and asynchronous assignments, including hands-on projects and face-toface communications, students develop their speaking, listening, reading, and writing skills. The cultural study and discussions are conducted in English, with topics alternating every two to three weeks. The ultimate goal of this course is to raise awareness and appreciation of different cultures through learning the basics of the Japanese language. The focus of this course is 60 percent on language and 40 percent on culture.

This course is appropriate for beginner-level students.

Japanese Language Through Culture II

Prerequisite: Japanese Language Through Culture I or permission from the instructor

This course (or its equivalent) is a prerequisite to Japanese III at GOA.
Through language learning, students in this course share their voices, cultivate global perspectives, and foster an appreciation for self and others. Students further develop the speaking, listening, writing, and reading skills introduced in Japanese Language Through Culture I. Each unit follows the IPA model (Integrated Performance Assessment), blending three modes of communication: interpretation of authentic material in Japanese, synchronous and asynchronous practice in speaking and writing, and oral and written presentations.
Each unit focuses on one of the following cultural topics: design and expression, ecology, entertainment, East meets West, harmony, and nature. In addition, students have the opportunity to select and pursue topics of their own interest.
Grammar topics cover the essential forms that are typically introduced in the second and third year of a high school Japanese program. By learning the dictionary form, nominalizer, TE form, TA form, NAI form, and noun modifier, students are able to add more complexity to their sentence construction. In doing so, they shift from forming simple sentences to communicating in coherent paragraphs.
As online learners, students are expected to exhibit superb time management and communication skills, as well as take ownership of their learning. While grammar instruction is delivered through asynchronous work and face-to-face meetings, much of the course content is curated and created by students through their research and collaboration.
The focus of this course is 60 percent on language and 40 percent on culture.

Japanese Language Through Culture III
Prerequisite: Japanese Language Through Culture I and II or permission from the instructor
Students in Japanese III have mastered most of the conjugation patterns (TE/TA form, dictionary form, and NAI form) that are necessary to speak and write in complex structures.
While advancing their grammatical knowledge, students compare and examine similar functions and their subtle differences. In speaking, students are allowed to speak in an informal/casual style with each other and with the teacher in order to solidify their control of the Plain Form.
Interpersonal communications are done through face-toface conversation and recorded messages. In reading and listening, students curate, share, and practice grasping the gist of authentic materials. Materials may include TV commercials, news, movies, children’s books, online newspapers, and cooking recipes. In Semester 2, students participate in the GOA Catalyst Exhibition.

Linear Algebra
Prerequisite: Geometry and Algebra 2 or the equivalents
In this course, students learn about the algebra of vector spaces and matrices by looking at how images of objects in the plane and space are transformed in computer graphics. Students

do some paper-and-pencil calculations early in the course, but the computer software package Geogebra (free) is used to do most calculations after the opening weeks. No prior experience with this software or linear algebra is necessary.
Following the introduction to core concepts and skills, students analyze social networks using linear algebraic techniques. Students learn how to model social networks using matrices as well as discover things about the network with linear algebra as their tool and will consider applications like Facebook and Google.

Medical Problem Solving I
This course is a prerequisite to Medical Problem Solving II at GOA.
In this course, students collaboratively solve medical mystery cases, similar to the approach used in many medical schools. Students enhance their critical-thinking skills as they examine data, draw conclusions, diagnose, and identify appropriate treatment for patients.
Students use problem-solving techniques in order to understand and appreciate relevant medical/biological facts as they confront the principles and practices of medicine. Students explore anatomy and physiology pertaining to medical scenarios and gain an understanding of the disease process, demographics of disease, and pharmacology. Additional learning experiences include studying current issues in health and medicine, interviewing a patient, and creating a new mystery case.

Medical Problem Solving II
Prerequisite: Medical Problem Solving I
Medical Problem Solving II is an extension of the problem-based approach in Medical Problem Solving I. While collaborative examination of medical case studies remain at the center of the course, MPS II approaches medical cases through the perspectives of global medicine, medical ethics, and social justice.
The course examines cases not only from around the world but also in students' local communities. Additionally, the course addresses the challenges patients face because of a lack of access to health care, often a result of systemic discrimination and inequity along with more general variability of health care resources in different parts of the world.
All students in MPS II participate in the Catalyst Exhibition, a GOA-wide conference near the end of the semester where students from many GOA courses create and publish presentations on course-specific topics. For their projects, students use all of the lenses from the earlier parts of the course to choose and research a local topic of high interest. Further, their topics enable identifying a local medical problem, using local sources, and generating ideas for promoting change.

Multivariable Calculus
Prerequisite: The equivalent of a college year of single-variable calculus, including integration techniques, such as trigonometric substitution, integration by parts, and partial fractions.

Completion of the AP Calculus BC curriculum with a score of 4 or 5 on the AP Exam would be considered adequate preparation.

In this course, students learn to differentiate and integrate functions of several variables. They extend the Fundamental Theorem of Calculus to multiple dimensions and the course culminates in Green's, Stokes', and Gauss' Theorems.

The course opens with a unit on vectors, which introduces students to this critical component of advanced calculus. They then move on to study partial derivatives, double and triple integrals, and vector calculus in both two and three dimensions. Students are expected to develop fluency with vector and matrix operations.

Understanding parametric curves as a trajectory described by a position vector is an essential concept, which allows us to break free from one-dimensional calculus and investigate paths, velocities, and other applications of science that exist in three-dimensional space. Students study derivatives in multiple dimensions and use the ideas of the gradient and partial derivatives to explore optimization problems with multiple variables as well as consider constrained optimization problems using Lagrangians. After studying differentials in multiple dimensions, the course moves to integral calculus. Students use line and surface integrals to calculate physical quantities especially relevant to mechanics, electricity, and magnetism, such as work and flux. They employ volume integrals for calculations of mass and moments of inertia and conclude with the major theorems (Green's, Stokes', Gauss') of the course, applying each to some physical applications that commonly appear in calculus-based physics.

Neuropsychology

Neuropsychology is the exploration of the neurological basis of behavior. Within this course, students learn about basic brain anatomy and function as well as cognitive and behavioral disorders from a neurobiological perspective. They do an in-depth analysis of neural communication with an emphasis on how environmental factors such as smartphones affect nervous system function, their own behaviors, and the behaviors of those around them.

Students also have the opportunity to choose topics in neuropsychology to explore independently including Alzheimer's disease, addiction, neuroplasticity, and CTE and share their understanding with their peers in a variety of formats. The course concludes with a study of both contemporary and historic neuropsychological case studies and their applications to everyday life.

Number Theory

Prerequisite: A strong background in Precalculus and above as well as a desire to do rigorous mathematics and proofs

Once thought of as the purest but least applicable part of mathematics, number theory is now by far the most commonly applied: every one of the millions of secure internet transmissions occurring each second is encrypted using ideas from number theory.

This course covers the fundamentals of this classical, elegant, yet supremely relevant subject. It provides a foundation for further study of number theory, but even more, it develops the skills of mathematical reasoning and proof in a concrete and intuitive way and is necessary preparation for any future course in upper-level college mathematics or theoretical computer science.

Students progressively develop the tools needed to understand the RSA algorithm, the most common encryption scheme used worldwide. Along the way, they invent some encryption schemes of their own and discover how to play games using number theory. Students also get a taste of the history of the subject, which involves the most famous mathematicians from antiquity to the present day, and see parts of the story of Fermat's Last Theorem, a 350-year-old statement that was fully proven only 20 years ago.

While most calculations are simple enough to do by hand, students sometimes use the computer to see how the fundamental ideas can be applied to the huge numbers needed for modern applications.

Personal Finance

In this course, students learn financial responsibility and social consciousness. They examine a wide array of topics including personal budgeting, credit cards and credit scores, career and earning potential, insurance, real estate, financial investment, retirement savings, charitable giving, taxes, and other items related to personal finance.

Students apply their understanding of these topics by simulating real-life financial circumstances and weighing the costs and benefits of their decisions. Throughout the course, students have the opportunity to learn from individuals with varying perspectives and expertise in numerous fields. By reflecting on their roles in the broader economy as both producers and consumers, students begin to consider how they can positively impact the world around them through their financial decisions.

Positive Psychology

What is a meaningful, happy, and fulfilling life? The focus of psychology has long been the study of human suffering, diagnosis, and pathology, but in recent years, however, positive psychologists have explored what's missing from the mental health equation, taking up research on topics such as love, creativity, humor, and mindfulness.

In this course, students dive into what positive psychology research tells us about the formula for a meaningful life, the ingredients of fulfilling relationships, and changes that occur in the brain when inspired by music, visual art, physical activity, and more. They also seek out and lean on knowledge from positive psychology research and experts, such as Martin Seligman's well-being theory, Mihaly Csikszentmihalyi's idea of flow, and Angela Lee Duckworth's concept of grit. In exploring such theories and concepts, students imagine and create real-world measurements using themselves and willing peers and family members as research subjects.

As part of the learning studio format of the course, students also imagine, research, design, and create projects that they share with a larger community. Throughout the development of these projects, students collaborate with each other and seek ways to make their work experiential and hands-on. Students leave the class with not only some answers to the question of what makes life meaningful, happy, and fulfilling, but also the inspiration to continue responding to this question for many years to come.

Prisons & Criminal Justice Systems

How do societies balance individual freedoms with security? How do definitions of "crime" and "punishment" shift across jurisdictions and time periods? How do recent protests and discussions about racial biases and systemic racism inform our understanding of criminal law and its applications? Although the United States has been frequently cited as having the highest "mass incarceration" rate, other countries in the world have also been criticized for injustices in their criminal justice systems.

In this course, students become familiar with the legal rules and institutions that determine who goes to prison and for how long. Along the way, students gain a concrete, practical understanding of legal systems while grappling with mass incarceration as a legal, ethical, and practical issue.

To understand current views on crime and criminal punishments and to examine proposed systemic reforms, students immerse themselves in the different forms of rhetoric and media that brought the U.S. and other nations to our present. They read and analyze jury arguments, courtroom motions, news op-eds, judicial decisions, recent cases, and other forms of public persuasion that shape the outcomes of criminal defendants.

The final project requires students to advocate for a major reform to a criminal justice system in a city, state, or country. Having developed research skills, students apply them to build an effective argument that includes a realworld solution.

Race & Society

What is race? Is it something we're born with? Is it an idea that society imposes on us? An identity we perform? A beneficial privilege? Does our own culture's conception of race mirror those found in other parts of the world? These are just a few of the questions that students in this course explore together as they approach the concept of race as a social construct that shapes and is shaped by societies and cultures in very real ways.

Throughout the course, students learn about the changing relationship between race and society across time and across cultures. Engaging with readings, films, and speakers from a variety of academic fields (history, sociology, anthropology, literature) students explore, research, reflect on, and discuss the complex set of relationships governing race and society.