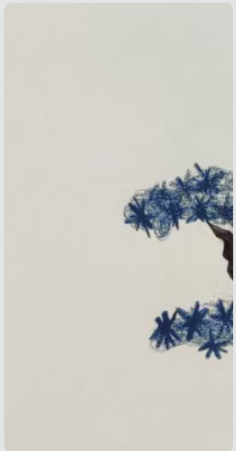
PDHS
COURSE CATALOG



2026-27

SHANGHAI AMERICAN SCHOOL

Illustration by Bellicia C.'27

SHANGHAI AMERICAN SCHOOL PUDONG

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CONTENTS

SAS is fully accredited by the Western Association of Schools and Colleges (WASC) and is an IB World School. SAS is also a member of CIS, EARCOS, and NACAC.

SCHOOLWIDE TRANSFER GOALS

SHANGHAI AMERICAN SCHOOL

A Shanghai American School education equips students to transfer their knowledge and skills beyond the classroom, in authentic settings, over a lifetime.

CRITICAL THINKERS — SAS students are critical thinkers who develop ideas and construct arguments by questioning, evaluating, synthesizing, and considering perspective. SAS students . . .

- Consider multiple approaches and perspectives to evaluate decisions
- Ask relevant, discerning questions to stimulate reflection
- Evaluate evidence and sources to support arguments and conclusions
- Synthesize and apply new understanding to a variety of contexts

SKILLFUL COMMUNICATORS — SAS students are skillful communicators who advocate for self, others, and ideas in more than one language by listening, responding, and articulating through multiple media. SAS students . . .

- Use appropriate listening skills to integrate information across contexts
- Respond to emotions in self and in others
- Articulate ideas with exceptional clarity
- Select an appropriate medium/a to communicate with an audience

EFFECTIVE COLLABORATORS — SAS students are effective collaborators who help teams innovate outcomes to achieve a goal by holding themselves and others accountable, contributing in productive ways, and sustaining respectful interactions. SAS students . . .

- Hold themselves and others accountable for team agreements
- Build on the perspectives and contributions of others
- Develop and implement appropriate strategies to manage interactions

CREATIVE LEARNERS — SAS students are creative learners who engage their imaginations to generate novel ideas, demonstrate flexible thinking, evaluate approaches, and take action. SAS students . . .

- Use their imagination to generate novel ideas
- Demonstrate flexible thinking
- Use strategies to evaluate the creative process
- Execute ideas with exceptional clarity and effectiveness

ETHICAL GLOBAL CITIZENS — SAS students are ethical global citizens who take action based on informed decisions filtered through empathy, integrity, sustainability, and social justice. SAS students . . .

- Acknowledge and respect perspectives and cultures with consideration and care
- Take action with honesty and sincerity
- Make decisions and take actions to impact sustainability significantly
- Engage in authentic opportunities to impact others positively

SAS MISSION

Shanghai American School inspires in all students:
上海美国学校激励并培养所有的学生:

A lifelong passion for learning
终身学习的热情

A commitment to act with integrity and compassion
诚信和仁爱的信念

The courage to live their dreams.
追求梦想的勇气。

"BEST FIT" PHILOSOPHY

At Shanghai American School we counsel and strongly encourage families to select an academic program that is guided by our "Best Fit" philosophy. In short, this means taking a program of study that:

- Develops the student's strengths, interests, and passions
- Matches the student's learning style
- Challenges the student to grow and develop into a vibrant member of our learning community
- Prepares the student to pursue their preferred course of study in the country of their choosing.

COURSE RIGOR

SAS advises students to take a maximum of 2 AP courses in Grade 10 and 3 IB HL and/or AP courses in Grades 11 and 12. If students wish to take more than this, they will need to follow an override process.

COURSE OFFERINGS

This catalogue represents courses that may be offered in the coming school year. It is based on the number of student requests as to whether a course will run.

GRADUATION REQUIREMENTS

The School's graduation requirements are designed to meet accreditation standards and entry requirements for a wide variety of colleges. To be eligible for high school graduation, a student must:

- Earn a minimum of 24 credits
- Attend eight semesters of high school in Grades 9 to 12 (therefore no student may graduate early)
- Attend SAS for all of Grade 12

Subject area requirements for graduation include:

- English 4.0 credits
- Mathematics 3.0 credits
- Science 3.0 credits
- Social Studies 3.0 credits
- Performing Arts, Visual Arts, Applied Arts 2.0 credits
- Global Language 2.0 credits (2 years of the same language)
- Physical Education/Health 2.0 credits
- Electives 5.0 credits

Special Programs at SAS

Shanghai American School, in addition to offering a wide variety of courses in Core Academic areas, has a number of Special Programs available to our high school students in their pursuit of learning. These Special Programs include:

- Advanced Placement Capstone Program and Diploma
- Innovation Institute
- IB Diploma
- Generative Technologies and Applied Engineering

Advanced Placement Capstone Program and Diploma

AP Capstone

AP Capstone is an innovative program developed by the College Board that gives students an opportunity to apply critical thinking, collaborative problem-solving, and research skills in a cross-curricular context.

AP Capstone is built on the foundation of a two-year high school course sequence–AP Seminar and AP Research – and is designed to complement and enhance the in-depth, discipline-specific study provided through AP courses. It cultivates curious, independent, and collaborative scholars and prepares them to make logical, evidence-based decisions.

AP Capstone was developed in response to feedback from higher education. The two AP Capstone courses, with their associated performance tasks, assessments, and application of research methodology, complement the rigor of AP courses and exams by challenging students to:

- Think critically and creatively to construct meaning or gain understanding
- Plan and conduct a study or investigation
- Propose solutions to real-world problems
- Plan and produce communication in various forms
- Collaborate to solve a problem
- Integrate, synthesize, and make cross-curricular connections

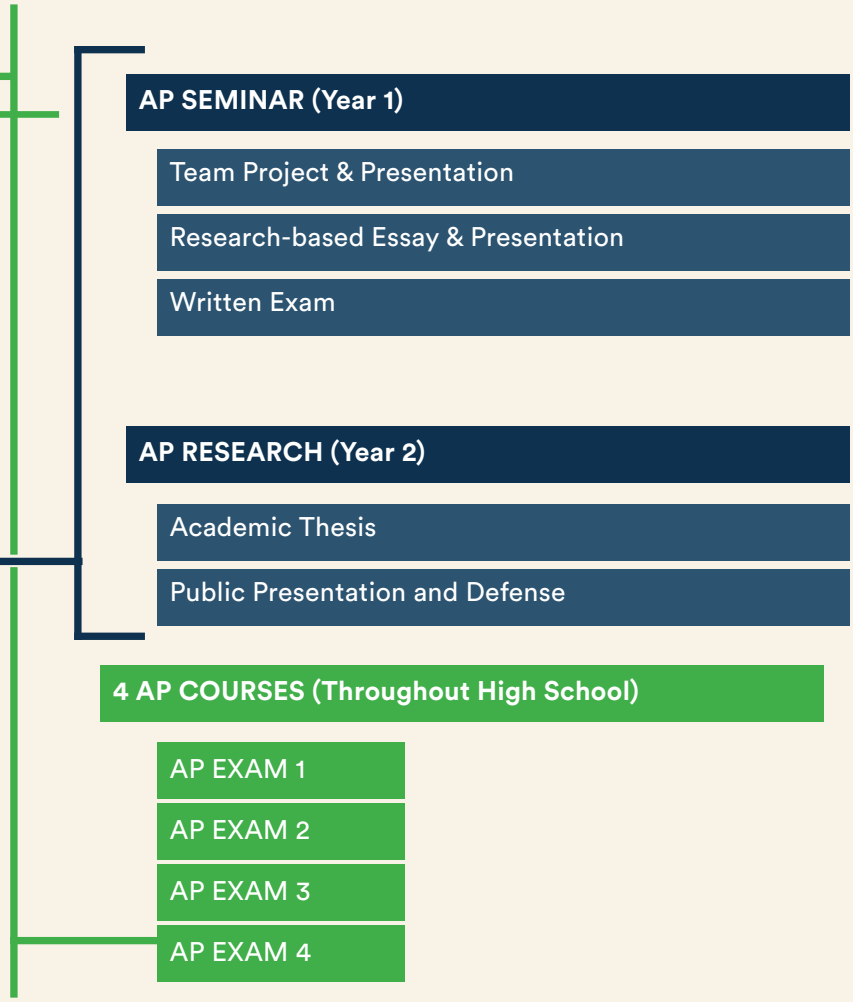
The AP Capstone program begins with the AP seminar course which all Innovation Institute 10th graders take and which, otherwise, is available in Grade 11.

AP Capstone Diploma™

Students who earn scores of 3 or higher in both of the AP Capstone courses and on four additional AP Exams of their choosing will receive the AP Capstone Diploma™.

AP Capstone Certificate™

Those students who earn scores of 3 or higher in both of the AP Capstone courses but not on the four additional AP Exams will receive the AP Capstone Certificate™, signifying successful performance in those courses.



The International Baccalaureate (IB) Diploma Program

The International Baccalaureate Diploma Program is a rigorous pre-university course of studies that meets the needs of highly motivated secondary school students. Designed as a comprehensive two-year curriculum that allows its graduates to fulfill requirements of various national education systems, the diploma model is based on the pattern of no single country but incorporates the best elements of many. It is a deliberate compromise between the specialization required in some national systems and the breadth preferred in others.

The IB Diploma program is available in English, French and Spanish. At SAS the program is offered in English. All students who take IB courses are required to take the IB exam at the conclusion of the course. Students may register for individual IB courses or for the full IB diploma.

Theory of Knowledge (TOK)

Students must complete an interdisciplinary course called Theory of Knowledge (TOK). This course is designed to stimulate critical reflection upon the knowledge and experiences gained inside and outside the classroom. TOK challenges students to question the basis of knowledge, to be aware of subjective and ideological biases, and to develop a personal mode of thought based on analysis of evidence expressed in rational argument. The key element in the IBO's educational philosophy, TOK seeks to develop a coherent approach to learning, which transcends and unifies the academic areas and encourages appreciation of other cultural perspectives.

Extended Essay (EE)

Students must undertake original research and write an extended essay of some 4,000 words. This offers the opportunity to investigate a topic of special interest from within one of their six examination subjects. It also acquaints students with the kind of independent research and writing skills expected at university. Each student works under the guidance of an appropriate subject teacher and will spend approximately 40 hours of private study and writing time to complete the essay.

Creativity, Activity, and Service (CAS)

Participation in the school's Creativity, Activity, and Service (CAS) program is intended to develop a student's creative, artistic and physical well-being. The CAS requirement seriously considers the importance of life outside the world of scholarship, providing a refreshing counterbalance to the academic self-absorption some may feel within a demanding school program. It also considers seriously the goals of educating the whole person and fostering more compassionate citizenship. Through participation in CAS activities, students are encouraged to share their energies and special talents, while developing awareness, concern and the ability to work cooperatively with others.

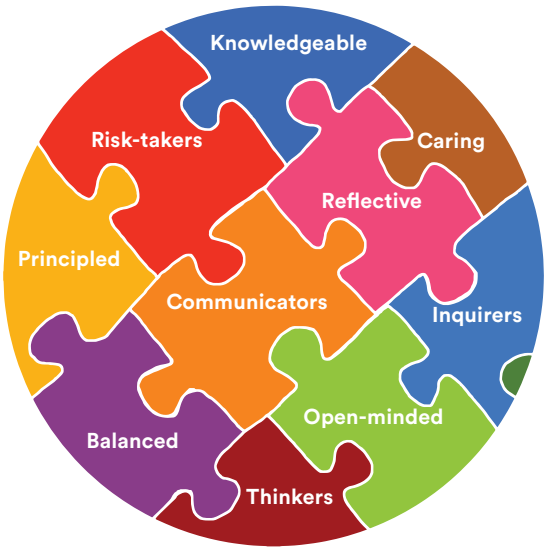
The aim of all IB Programmes is to develop internally minded people who, recognizing their common humanity and shared guardianship of the planet, help to create a better and more peaceful world.

IB Diploma Subject Requirements

Diploma candidates are required to select one subject from each of the six subject groups. Students may opt out of Art for another subject. Usually three subjects are taken at Higher Level (HL) and three others at Standard Level (SL). Higher Level courses cover 240 teaching hours and Standard Level courses cover 150 teaching hours. Hence, over a two-year period, some subjects are studied in depth and some more broadly. SAS will add or delete courses and offer some courses at HL or SL according to student demand and staff availability.

Additional IB Diploma Requirements

The program offers special features in addition to the six subjects of the curriculum that is central to the diploma.



NEW - SAS GENERATIVE TECHNOLOGIES & APPLIED ENGINEERING (GTAE) PATHWAY

SAS is introducing a new Pathway for students interested in disciplines related to Generative Technology and Applied Engineering.

Overview of Pathway:

<table>
<tr><th>Grade 9-12</th><th>Grade 10-11-12</th><th>Grade 11-12</th></tr>
<tr><td>Foundational Year
Quarterly Courses
NEW 2026-27</td><td>Semester Courses
Non-sequential
NEW 2027-28</td><td>Full Year Course</td></tr>
<tr><td>Introduction to Robotics
(Robotics & Automation)</td><td>Advanced Physical Computing</td><td rowspan="7">Engineering & Entrepreneurship
Capstone Project/Lab
NEW 2026-27</td></tr>
<tr><td>Introduction to
Product Design & Manufacturing</td><td>Machine Learning
(deeper dive into AI)</td></tr>
<tr><td rowspan="2">Introduction to Physical Computing</td><td>Generative Tech
(LLMs on Raspberries & Machine Learning)</td></tr>
<tr><td>Game Design</td></tr>
<tr><td>Introduction to Applied Engineering</td><td>Immersion Lab
(offsite immersion & onsite lab)</td></tr>
<tr><td>Introduction to Python Programming
for Engineers</td><td>Product Development</td></tr>
<tr><td rowspan="2">Introduction to Design Theory
(for students new to SAS or without Middle School Design Technology experience)</td><td>Cyber Security</td></tr>
<tr><td colspan="2">AP & IB Courses</td></tr>
<tr><td colspan="3">ASAs/Clubs</td></tr>
</table>

Please note that any combination is possible. Below are some ideas for possible Pathways to consider:
Interest in Robotics and Engineering: Introduction to Robotics, Introduction to Product Design & Manufacturing, Introduction to Physical Computing, and Applied Engineering.
Interest in Computer Science and Physical Computing: Introduction to Coding for Engineers, Introduction to Physical Computing, Introduction to Robotics, Intro to Applied Engineering.
Interest in Design: Introduction to Design Theory, Applied Engineering, Applied Manufacturing, and Capstone
Follow your own interests: Any combination that gives you the experiences you seek.

SAS INNOVATION INSTITUTE

The Innovation Institute is a transformational approach to education in which students are empowered to solve real-world problems through collaborative and creative processes. The Institute places learners at the center of the educational experience and challenges them to think critically and apply their learning to complex, interdisciplinary tasks. Students are asked to stretch themselves beyond the traditional learning framework by engaging in Project Based Learning that requires the use of 21st century skills.

2021-2022 was the inaugural year for the Innovation Institute at SAS Pudong. Grade 8 families will be invited to apply to participate in the spring. Qualifying applications will be placed in a lottery to determine the makeup of the ninth grade cohort. Cohorts will have a maximum number of 18 students.

The Innovation Institute is founded on four core principles.

1. Provide a 21st century learning environment where students actively apply the skills of communication, collaboration, creativity, and critical thinking.
2. Integrate core academic disciplines so that students explore learning concepts by making connections across academic domains.
3. Incorporate relevant, real-life situations through effective implementation of project-based learning.
4. Ensure that interdisciplinary project-based learning is rigorous, and all students taking a specific course will receive instruction driven by the same SAS standards.

Participation in the Innovation Institute requires a two-year commitment. Institute students in Grade 9 and 10 are a part of a small learning community with four teachers who collaborate closely in order to provide an integrated learning experience.

Students will take three of their seven courses in the Institute. The courses are noted below:

GRADE 9
English 9
Asian History
Physics-Chemistry Lab Science

GRADE 10
English 10
AP Seminar
Biology Lab Science

What differentiates the Innovation Institute from the core program? The curriculum is taught through shared themes and projects that connect all four Institute courses, which allows students to explore the topics in an applied, real-world manner. During projects, students engage in design thinking processes and receive feedback from experts. Students are assessed through traditional assessments such as quizzes, exams, and essays; however, they will also be asked to apply their learning through collaborative projects that address real-world issues. For more information about the Innovation Institute please contact Ivan Velasco at ivan.velasco@saschina.org.

MASTER COURSE LIST

ENGLISH

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Course	Course Codes	Credits	Grades
English 9	HS1000	1	9
English 10	HS1001	1	10
English 11	HS1002	1	11
English 12	HS1003	1	12
Literature and Film	HS1405	1	10,11,12
AP English Language & Composition	HS1200	1	11,12
AP English Literature & Composition	HS1201	1	12
IB English A: Literature SL Y1-Y2	HS1110 HS1120	2	11 12
IB English A: Literature HL Y1-Y2	HS1130 HS1140	2	11 12
IB English A: Language & Literature SL Y1-Y2	HS1111 HS1121	2	11 12
IB English A: Language & Literature HL Y1-Y2	HS1131 HS1141	2	11 12

SOCIAL STUDIES

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Course	Course Codes	Credits	Grades
Asian History	HS2000	1	9
Modern World History	HS2001	1	10,11,12
US History	HS2002	1	10,11,12
Sociology	HS2009	1	10,11,12
AP US Government and Politics	HS22090	1	11,12
AP US History	HS2202	1	10,11,12
AP Psychology	HS2203	1	11,12
AP Economics	HS2204	1	11,12
AP World History	HS2206	1	10,11,12
AP Human Geography	HS2207	1	10,11,12
IB Economics SL Y1-Y2	HS2114 HS2124	2	11 12
IB Economics HL Y1-Y2	HS2134 HS2144	2	11 12
IB Business Management SL Y1-Y2	HS2117 HS2127	2	11 12
IB Business Management HL Y1-Y2	HS2137 HS2147	2	11 12
IB Psychology SL Y1-Y2	HS2113 HS2123	2	11 12
IB Psychology HL Y1-Y2	HS2133 HS2143	2	11 12
IB Environmental Systems & Societies SL Y1-Y2	HS4115 HS4125	1	11 12
IB Global Politics SL Y1-Y2	HS2153 HS2154	2	11 12
IB Global Politics HL Y1-Y2	HS2163 HS2164	2	11 12

MATHEMATICS

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Course	Course Codes	Credits	Grades
Integrated Math 1 (IM1)	HS3203	1	9,10,11,12
Integrated Math 2 (IM2)	HS3205	1	9,10,11,12
Integrated Math 2+ (IM2+)	HS3205A	1	9,10,11,12
Integrated Math 3 (IM3)	HS3207	1	9,10,11,12
Integrated Math 3+ (IM3+)	HS3208	1	9,10,11,12
Statistical Math	HS3007	1	9,10,11,12
Pre-Calculus	HS3011	1	9,10,11,12
AP Pre-Calculus	HS3012	1	9,10,11,12
AP Calculus AB	HS3200	1	9,10,11,12
AP Calculus BC	HS3201	1	9,10,11,12
AP Statistics	HS3202	1	9,10,11,12
Multivariable Calculus	HS3204	1	9,10,11,12
IB Math: App + Interpretation SL Y1-Y2	HS3113 HS3123	2	11,12 11,12
IB Math: App + Interpretation HL Y1-Y2	HS3133 HS3143	2	11 12
IB Math: Analysis + Approaches SL Y1-Y2	HS3114 HS3124	2	11 12
IB Math: Analysis + Approaches HL Y1-Y2	HS3134 HS3144	2	11 12

SCIENCE

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Course	Course Codes	Credits	Grades
Physics/Chemistry Lab Science	HS4007	1	9
Biology Lab Science	HS4008	1	10
Chemistry	HS4004	1	11,12
Earth & Space Science	HS4029	1	11,12
AP Biology	HS4200	1	10,11,12
AP Chemistry	HS4201	1	11,12
AP Physics 1	HS4210	1	11,12
AP Environmental Science	HS4203	1	11,12
AP Physics C: Mechanics	HS4208	1	11,12
AP Physics C: Electricity & Magnetism	HS4209	1	12
IB Biology SL Y1-Y2	HS4110 HS4120	2	11 12
IB Biology HL Y1-Y2	HS4130 HS4140	2	11 12
IB Chemistry SL Y1-Y2	HS4111 HS4121	2	11 12
IB Chemistry HL Y1-Y2	HS4131 HS4141	2	11 12
IB Environmental Systems & Societies SL Y1-Y2	HS4115 HS4125	2	11 12
IB Environmental Systems & Societies HL Y1-Y2	HS4103 HS4145	1	
IB Physics SL Y1-Y2	HS4112 HS4122	2	11 12
IB Physics HL Y1-Y2	HS4132 HS4142	2	11 12

CHINESE LANGUAGE

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Course	Course Codes	Credits	Grades
Novice Chinese	HS5024A	1	9,10,11,12
Intermediate Low Chinese	HS5025A	1	9,10,11,12
Intermediate Mid Chinese	HS5026	1	9,10,11,12
Intermediate High Chinese	HS3033	1	9,10,11,12
Advanced Low Chinese	HS5031	1	9,10,11,12
Advanced Mid Chinese	HS5032	1	9,10,11,12
Advanced High Chinese	HS3034	1	9,10,11,12
Superior Chinese	HS5147	1	11, 12
Superior Chinese 2	HS5149A		12
IB Mandarin *Ab Initio* SL Y1-Y2	HS5159 HS5150	2	11 12
IB Mandarin B SL Y1-Y2	HS5113 HS5123	2	11 12
IB Mandarin B HL Y1-Y2	HS5133 HS5143	2	11 12
IB Chinese A: Lang. & Lit. SL Y1-Y2	HS5114 HS5124	2	11 12
IB Chinese A: Lang. & Lit. HL Y1-Y2	HS5134 HS5144	2	11 12

GLOBAL LANGUAGES

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Course	Course Codes	Credits	Grades
French Novice	HS2001	1	9,10,11,12
French Intermediate Mid	HS5002	1	9,10,11,12
French Intermediate High	HS5003	1	9,10,11,12
French Advanced Low	HS5004	1	9,10,11,12
French Advanced Mid	HS5022	1	9,10,11,12
IB French Ab Initio Y1-Y2	HS5151 HS5152	2	11 12
IB French B SL Y1-Y2	HS5110 HS5120	2	11 12
IB French B HL Y1-Y2	HS5130 HS5140	2	11 12
Spanish Novice	HS5005	1	9,10,11,12
Spanish Intermediate Mid	HS5006	1	9,10,11,12
Spanish Intermediate High	HS5007	1	9,10,11,12
Spanish Advanced Low	HS5008	1	9,10,11,12
Spanish Advanced Mid	HS5021	1	9,10,11,12
IB Spanish Ab Initio Y1-Y2	HS5155 HS5156	2	11 12
IB Spanish B SL Y1-Y2	HS5111 HS5121	2	11 12
IB Spanish B HL Y1-Y2	HS5131 HS5141	2	11 12
IB Self Taught Language A1 SL Y1-Y2	HS5102 HS5103	2	11 12

VISUAL ARTS

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Course	Course Codes	Credits	Grades
Art Foundations	HS6001	1	9,10,11,12
Studio Art	HS6014	1	10,11,12
Advanced Studio Art 1	HS6007	1	11,12
Advanced Studio Art 2	HS6008	1	12
Photography	HS6035	1	9,10,11,12
Advanced Photography 1, 2, 3	HS6012 HS6012B HS6012C	1	10,11,12 11,12 12
Creativity and Design (Inno G9)	HS6050	1	9
Innovation & Design (Inno G10)	HS6051	1	10
AP 2D Design	HS6202	1	11, 12
IB Visual Arts SL Y1-Y2	HS6110 HS6120	2	11 12
IB Visual Arts HL Y1-Y2	HS6130 HS6140	2	11 12
Digital Film Making	HS8001	1	9,10,11,12
Advanced Digital Film Making 1,2,3	HS8005 HS8005B HS8005C	1	10,11,12 11,12 12
IB Film SL Y1-Y2	HS8165 HS8175	2	11 12
IB Film HL Y1-Y2	HS8185 HS8195	2	11 12
Graphic Design	HS8010	1	9,10,11,12
Advanced Graphic Design 1, 2, 3	HS8010A HS8010B HS8010C	1	10,11,12 11,12 12

PERFORMING ARTS

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Course	Course Codes	Credits	Grades
Contemporary Music	HS1404	1	9,10,11,12
Advanced Contemporary Music	HS1404B	1	10,11,12
Advanced Choir	HS6041	1	9,10,11,12
Concert Band: Beginning	HS6039	1	9
Concert Band: Intermediate	HS6042	1	9,10,11,12
Concert Band: Advanced	HS6043	1	9,10,11,12
Orchestra: Prelude	HS6054	1	9,10
Orchestra: Intermezzo	HS6056	1	9,10
Orchestra: Finale	HS6055	1	9,10,11,12
Orchestra: Advanced	HS6045	1	9,10,11,12
Theatre Design	HS6059	1	9,10,11,12
Advance Theatre Design	HS6060	1	10,11,12
Theatre 1	HS6057	1	9,10,11,12
Theatre 2	HS6058	1	10,11,12
Dance 1	HS7010	1	9,10,11,12
Dance 2	HS7011	1	9,10,11,12
IB Dance SL Y1-Y2	HS7013 HS7033	2	11 12
IB Dance HL Y1-Y2	HS7023 HS7043	2	11 12
IB Music SL Y1-Y2	HS6111 HS6121	2	11
IB Music HL Y1-Y2	HS6131 HS6141	2	11
IB Theatre SL Y1-Y2	HS6112 HS6122	2	11 12
IB Theatre HL Y1-Y2	HS6132 HS6142	2	11 12

APPLIED ARTS

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Course	Course Codes	Credits	Grades
Electrical and Mechanical Design	HS6066	1.0	9,10,11,12
Engineering and Robotics	HS6067	1.0	9,10,11,12

NEW - SAS GENERATIVE TECHNOLOGIES & APPLIED ENGINEERING (GTAE) PATHWAY

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Course	Course Codes	Credits	Grades
Introduction to Robotics (Robotics & Automation)	HS0009	0.25	9,10,11,12
Introduction to Product Design & Manufacturing	HS0009	0.25	9,10,11,12
Introduction to Physical Computing	HS0009	0.25	9,10,11,12
Introduction to Python Programming for Engineers	HS0009	0.25	9,10,11,12
Fundamentals of Game Development	HS0009	0.25	9,10,11,12
Fundamentals of Applied Engineering	HS0009	0.25	9,10,11,12
Introduction to Design Theory	HS0009	0.25	9,10,11,12
Engineering Capstone	HS8406	1	11,12

PHYSICAL AND HEALTH EDUCATION

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Course	Course Codes	Credits	Grades
Physical & Health Education 1	HS7000	1	9
Physical & Health Education 2	HS7001	1	10
Physical & Health Education 3 – Personal Fitness	HS7004	1	11,12
PE 3 – Water Safety Instructor	HS7006	0.5	11,12
PE 3 – Lifeguarding	HS7007	0.5	11,12

OTHER COURSES

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Course	Course Codes	Credits	Grades
IB Theory of Knowledge Y1-Y2	HS8101 HS8102	1	11 12
AP Computer Science A	HS8201	1	10,11,12
AP Computer Science Principles	HS8204	1	9,10,11,12
AP Capstone Seminar (Y1 of Capstone Diploma or Certificate)	HS8202	1	10 (Inno), 11
AP Capstone Research (Y2 of Capstone Diploma or Certificate)	HS8203	1	11 (Inno. Inst. only),12
IB Computer Science SL Y1-Y2	HS8115	1	11,12
IB Computer Science HL Y1-Y2	HS8135	1	11,12

ENGLISH COURSES

English Department Flow Chart

Grade 9 students must enroll in:

English 9

Grade 10 students must choose one of the courses below

English 10

Literature and Film

Grade 11 students may choose any of the courses below based on meeting prerequisites

English 11

IB English A: Language & Literature SL/HL Y1
(two-year course)

IB English A: Literature SL/HL Y1
(two-year course)

AP English Language & Composition

Literature and Film

Grade 12 students may choose any of the courses below based on meeting prerequisites

English 12

IB English A: Language & Literature SL/HL Y2
(two-year course)

IB English A: Literature SL/HL Y2
(two-year course)

AP English Language & Composition

AP English Literature & Composition

Literature and Film

Legend

- AP course
- IB course
- SAS course

INTRODUCTION

The English department seeks to prepare students to be critical thinkers, readers, and writers; our program is designed to rigorously prepare students for both the IB and AP courses we offer, as well as to prepare students for the rigors of collegiate writing. Students must take four years of English as an SAS graduation requirement.

COURSE OF STUDY

All Grade 9 students will be enrolled in English 9; this is a general survey course, with a focus on academic literacy, academic writing, and research.

All Grade 10 students will be enrolled in English 10 or Literature and Film.

Grade 11 students have a variety of course options:

- Grade 11 students who are not taking IB or AP coursework must enroll in English 11.
- Students in the IB Diploma Program may enroll in IB A Language and Literature or IB A Literature. Both courses are offered at standard and higher level. Non-diploma students may take either course as a certificate course; the time commitment is two years long.
- Students may take AP English Language and Composition.
- Students may take Literature and Film.

Grade 12 students have a variety of course options:

- Grade 12 students not enrolled in AP or IB coursework must enroll in English 12 or Literature and Film.
- Students who were enrolled in IB A Language and Literature or IB A Literature must enroll in the second year of that course.
- Students may take AP English Language and Composition.

English 9

Prerequisites: None
Grade Levels: Grade 9
Course Description

English 9 introduces students to global literature across genres while building foundational skills in reading, writing, and discussion. The course emphasizes academic literacy, literary analysis, and clear communication.

Main Topics

- Global literature across genres
- Literary elements and analysis
- Academic writing foundations
- Research introduction
- Seminars and discussions
- Cultural and thematic connections

Learning Outcomes

- Analyze literary texts and themes
- Write structured analytical responses
- Participate in discussions effectively
- Apply foundational research and citation skills

English 10

Prerequisites: One Year of English
Grade Levels: Grade 10
Course Description

English 10 focuses on global literature and rhetorical analysis while strengthening analytical writing and oral communication. Students explore multiple genres and connect texts to culture, identity, and contemporary issues.

Main Topics

- American and global literature
- Genre study
- Literary analysis
- Analytical and multimodal writing
- Seminars and discussions

Learning Outcomes

- Analyze how authors develop meaning
- Write clear, evidence-based analytical essays
- Contribute meaningfully to discussions
- Make connections between texts and real-world issues

English 11

Prerequisites: Two Years of English
Grade Levels: Grade 11
Course Description

English 11 develops students' analytical, creative, and research skills through concept-based units exploring global literature and contemporary issues. Students read across genres and choose from multiple assessment modes—written analysis, oral performance, creative work, and research—to demonstrate their understanding.

Main Topics

- Concept-based thematic units
- Global literature
- Analytical and argumentative writing
- Creative writing
- Research and synthesis
- Academic discussions

Learning Outcomes

- Write sustained analytical and argumentative essays
- Conduct research and synthesize evidence
- Analyze literary and nonliterary texts
- Communicate clearly in discussions and presentations

English 12

Prerequisites: Three Years of English
Grade Levels: Grade 12
Course Description

English 12 refines students' academic, creative, and research writing through units centered on the guiding question "Are humans moral?" Students apply four years of English skills to literary analysis, film study, and a culminating passion project.

Main Topics

- Personal narrative writing
- Moral philosophy in literature
- Film and literary analysis
- Research writing
- Performing engaging presentations
- Passion project

Learning Outcomes

- Craft personal and analytical essays
- Integrate research into writing

- Analyze texts through thematic and ethical lenses
- Present ideas for academic audiences

Literature and Film

Prerequisites: None
Grade levels: Grades 10–12
Course Description

Literature and Film examines how literature is adapted to film and how meaning shifts across mediums. Students compare narrative techniques and study how filmmakers and authors convey ideas through different artistic choices.

Main Topics

- Adaptation theory
- Film analysis techniques
- Comparative literary study
- Cinematic storytelling
- Genre studies
- Media literacy

Learning Outcomes

- Analyze adaptations across media
- Apply film terminology in analysis
- Compare narrative structures and choices
- Communicate ideas in written and oral formats

AP English Language & Composition

Prerequisites: English 10
Grade Levels: Grade 11, 12
Course Description

AP Language develops advanced skills in rhetorical analysis, argumentation, and synthesis through the study of nonfiction texts. Students practice reading complex prose and crafting clear, persuasive writing.

Main Topics

- Rhetorical strategies
- Argumentation
- Synthesis writing
- Nonfiction analysis
- Style and voice
- Research integration

Learning Outcomes

- Analyze rhetorical choices in nonfiction
- Write effective argumentative and synthesis essays
- Read complex texts with precision
- Use evidence strategically in writing

AP English Literature & Composition

Prerequisites: AP Language
Grade Levels: Grade 11–12
Course Description

AP Literature focuses on close reading and analysis of imaginative literature, emphasizing how authors use structure, figurative language, and narrative choices to create meaning. Students write interpretive essays supported by textual evidence.

Main Topics

- Close reading
- Poetry analysis
- Novel and drama study
- Literary devices
- Interpretive writing
- Comparative analysis

Learning Outcomes

- Analyze complex literary texts
- Explain how authorial choices shape meaning
- Write interpretive essays with strong evidence
- Engage in academic discussions of literature

IB English A: Literature (SL/HL)

Prerequisites: English 10
Grade levels: Grades 11–12 (Y1-Y2)
Course Description

IB Literature emphasizes deep study of global literary texts and critical analysis of how literature reflects culture, context, and artistic expression. Students examine authorial choices and develop sophisticated interpretive writing.

Main Topics

- World literature
- Close reading and commentary
- Contextual analysis
- Comparative study
- IB internal and external assessments

Learning Outcomes

- Analyze literary form, meaning, and context
- Write formal literary commentaries
- Discuss texts using academic vocabulary
- Develop comparative literary interpretations

IB English A: Language & Literature (SL/HL)

Prerequisites: English 9 and 10
Grade levels: Grades 11–12 (Y1-Y2)
Course Description

IB Lang/Lit integrates the study of literature, media, and language, examining how texts construct meaning in cultural and global contexts. Students analyze literary and nonliterary texts while developing strong critical and comparative skills.

Main Topics

- Media and language analysis
- Literary study
- Rhetoric and power
- Global contexts
- Comparative analysis
- IB internal and external assessments

Learning Outcomes

- Analyze how language constructs meaning and identity
- Interpret literary and nonliterary texts
- Write analytical and comparative essays
- Engage with texts from multiple perspectives

SOCIAL STUDIES COURSES

Social Studies Department Flow Chart

Grade 9 students must enroll in:

- **Asian History**

Grade 10 students may choose any of the courses below based on meeting prerequisites:

- **US History** (Open to Gr. 10,11,12)
- **Modern World History** (Open to Gr. 10,11,12)
- **Sociology**
- **AP Human Geography** (Open to Gr. 10,11,12)
- **AP US History** (Open to Gr. 10,11,12)
- **AP World History** (Open to Gr. 10,11,12)

Grade 11 and 12 students may choose any of the courses below based on meeting prerequisites:

- **Modern World History**
- **Sociology**
- **US History**
- **AP Human Geography**
- **AP Economics**
- **AP Psychology**
- **AP US History**
- **AP US Government**
- **AP World History**
- **IB Business Management SL/HL** (two-year course)
- **IB Economics SL/HL** (two-year course)
- **IB Environmental Systems & Societies SL** (two-year course)
- **IB Global Politics SL/HL** (two-year course)
- **IB Psychology SL/HL** (two-year course)

Legend

- AP course
- IB course
- SAS course

INTRODUCTION

The goals of the Social Studies Department are for students to gain an appreciation of cultural diversity, an overview of history (Asian, US, and/or world), and an understanding of contemporary issues. They will develop an awareness of the economic, social, political, and environmental interdependence of all nations and peoples.

Through their coursework in social studies classes, students will master skills in locating, compiling, and weighing evidence, in examining their values, and in formulating a personal philosophy. They will be able to recognize contributions of past and present cultures by incorporating them into a commitment to equal rights and opportunities.

They will acquire knowledge of their role in today's world and their place in the world of the 21st century. In addition, students will gain skills in critical thinking, problem solving, research, and communication.

Students must take at least three credits in social studies in order to fulfill graduation requirements. Grade 9 students are required to enroll in Asian History. In Grade 10, students may choose between a US History survey course, a Modern World History survey course, Sociology, AP World History, or AP US History.

Students in Grades 11 and 12 may choose any of those courses open to Grade 10 students; in addition, Grade 11 and 12 students can elect to take a variety of courses, including AP and IB level courses, in fields such as economics, history, government, law, psychology.

Asian History

Prerequisites: None
Grade Levels: Grade 9
Course Description

Asian History explores the diverse geography, cultures, religions, and historical developments of Asia, spanning thousands of years. Students will examine key themes such as cooperation and conflict, belief systems, empires, trade, and globalization to understand the impact of the past on the modern world. The course emphasizes critical thinking, historical analysis, and effective communication through writing and discussion. Students develop skills in research, writing, critical thinking, and source analysis while exploring historical topics that connect to their interests and lived experiences.The course prepares students for a smooth transition into Grade 10 by strengthening academic communication and inquiry skills.

Main Topics

- Foundations of Asian Civilizations
- Political Systems and Historical Governance
- Economic Development and Trade in Asia
- Culture, Religion, and Philosophy
- Colonialism, Imperialism, and Nationalism
- Revolutions, Reform, and Modernization
- Globalization and Contemporary Issues in Asia
- Historical Inquiry and Source Evaluation

Learning Outcomes

- Analyze primary and secondary sources using historical thinking skills
- Explain the political, economic, cultural, and social developments shaping Asian societies
- Construct written arguments using evidence and historical reasoning
- Compare multiple perspectives in Asian historical events and issues
- Conduct research to explore topics of personal interest in Asian history
- Communicate ideas clearly through essays, presentations, and discussions
- Demonstrate understanding of how history influences current events in Asia
- Develop the academic habits required for success in Grade 10 social studies and humanities courses

Modern World History

Prerequisites: None
Grade Levels: Grade 10–12
Course Description

Modern World History examines key global events, movements, and developments from the late Middle Ages to the present. Students explore themes such as revolution, industrialization, globalization, and their impact on societies worldwide. The course emphasizes critical thinking, source analysis, and understanding connections between the past and present.

Main Topics

- Renaissance, Reformation, and Scientific Revolution
- Age of Exploration and Global Exchange
- Political Revolutions: American, French, and Latin American
- Industrialization and Economic Systems
- Imperialism and its Global Impact
- World Wars and Global Conflicts
- Decolonization and Nationalism
- Globalization and Contemporary Issues

Learning Outcomes

- Analyze historical events and their effects on societies and cultures.
- Understand the causes and consequences of political, social, and economic changes.
- Evaluate the impact of global interactions and exchanges on world history.
- Identify patterns of continuity and change over time.
- Develop skills to interpret and analyze primary and secondary sources.
- Compare key historical developments across regions and time periods.
- Examine the roots of modern global issues and challenges.
- Communicate historical arguments effectively in writing and discussion.

AP World History (Modern)

Prerequisites: None
Grade Levels: Grade 10–12
Course Description

AP World History: Modern explores significant events, individuals, developments, and processes from approximately 1200 CE to the present. Students develop historical thinking skills through the analysis of primary and secondary sources, comparison, causation, and continuity and change over time. This course prepares students for the AP exam and provides a foundation for understanding global historical trends and themes.

Main Topics

- The Global Tapestry: Developments in East Asia, Dar al-Islam, South and Southeast Asia, and the Americas.

- Networks of Exchange: Trade routes, cultural diffusion, and economic systems.
- Land-Based Empires: Governance and expansion in major empires (1450–1750).
- Transoceanic Interconnections: Exploration, colonization, and the Columbian Exchange.
- Revolutions and Ideologies: Enlightenment, revolutions, and new political ideologies.
- Industrialization and Its Effects: Economic systems, social changes, and innovations.
- Global Conflicts: Causes and consequences of 20th-century wars.
- Decolonization and Globalization: Post-WWII movements and modern interconnectedness

Learning Outcomes
- Analyze historical evidence and develop arguments based on primary and secondary sources.
- Compare historical developments across different regions and contexts.
- Evaluate causes and effects of major historical events and processes.
- Trace patterns of continuity and change over time in global history.
- Develop contextual understanding of global interactions and exchanges.
- Synthesize diverse historical perspectives to understand global trends.
- Apply historical reasoning skills to analyze complex developments.
- Demonstrate understanding of AP historical themes such as governance, culture, and technology

IB Economics

Prerequisites: None
Grade Levels: Grade 11–12
Course Description

IB Economics explores the interconnected nature of economic activity in a rapidly changing world, emphasizing how scarcity influences decision-making at individual, national, and global levels. Students learn to apply economic theories, models, and tools to real data and real-world issues. The course develops critical thinking, analytical skills, and a deeper understanding of the impact of economic choices on society, promoting responsible and informed participation as global citizens.

Main Topics
- The Problem of Scarcity and Choice
- Microeconomics: Markets, Elasticity, Market Failure, and Firm Behavior
- Macroeconomics: Inflation, Unemployment, Output, and Economic Growth
- Government Intervention and Policy Tools
- International Trade and Trade Protection
- Exchange Rates and Balance of Payments
- Economic Development and Sustainability
- Data Analysis and Modelling Using Real-World Applications

Learning Outcomes
- Apply economic theories and models to real-world economic issues
- Analyze and interpret quantitative and qualitative economic data
- Evaluate government policies using evidence-based reasoning
- Explain the choices made by individuals, firms, and governments using economic concepts
- Assess trade-offs involving efficiency, equity, sustainability, and economic growth
- Develop critical thinking and problem-solving skills through economic inquiry
- Communicate economic arguments clearly using appropriate terminology and data
- Demonstrate responsible citizenship by understanding the global consequences of economic decisions

AP Seminar

Prerequisites: None
Grade Levels: Grade 10–11 (varies by school placement)
Course Description

AP Seminar is the foundational course of the AP Capstone Program, where students investigate real-world issues through multiple perspectives and cross-curricular lenses. The course strengthens students' ability to think critically and creatively, conduct research, collaborate effectively, and communicate evidence-based arguments across a variety of media. Students engage with diverse sources—academic texts, media, speeches, research studies, and artistic works—to develop deeper understanding of complex issues and their relevance to their own lives. All students sit the AP Seminar exam at the end of the course.

Main Topics
- Critical Thinking and Perspective Analysis
- Research Methods and Question Formulation
- Evaluating Credibility and Bias in Sources
- Constructing Evidence-Based Arguments
- Team Research and Presentation Skills
- Individual Academic Argument
- Cross-Curricular Understanding of Complex Issues
- Written, Visual, and Multimedia Communication

Learning Outcomes
- Formulate research questions that investigate complex issues
- Evaluate sources for credibility, reliability, and relevance
- Analyze multiple perspectives and synthesize information from varied texts/media
- Develop logical, evidence-based arguments using valid reasoning
- Collaborate to design and present team research projects
- Deliver effective oral and visual presentations for academic audiences
- Write structured, research-based essays using proper citation and ethical research practices
- Demonstrate academic integrity and responsible use of information in real-world inquiry

IB Global Politics

Prerequisites: None (recommended: interest in contemporary issues and inquiry)
Grade Levels: Grade 11–12
Course Description

IB Global Politics explores power and political issues at local, national, international, and global levels. Students examine contemporary case studies through the core concepts of power, sovereignty, legitimacy, and interdependence. The course emphasizes inquiry, diverse perspectives, and experiential learning through the Engagement Project and, at HL, independent research into global political challenges.

Main Topics
- Core concepts: power, sovereignty, legitimacy, interdependence

- Political actors and systems
- Rights & Justice
- Development & Sustainability
- Peace & Conflict
- Contemporary case studies
- Engagement Project
- (HL) Global Political Challenges

Learning Outcomes
- Analyze political issues using key concepts
- Apply theories and models to real cases
- Evaluate power dynamics and political actors
- Interpret rights, development, sustainability, and conflict issues
- Use systems thinking to understand global interconnections
- Conduct inquiry and stakeholder engagement
- Communicate arguments effectively
- (HL) Analyze multiple global political challenges

AP Capstone Research

Prerequisites: Successful completion of AP Seminar (required by College Board)
Grade Levels : Grade 11–12
Course Description

AP Research is the second course in the AP Capstone program, guiding students through the design and execution of a yearlong, college-level inquiry project. Students learn discipline-specific research methods, synthesize scholarly literature, develop an academic paper of 4,000–5,000 words, and present and defend their findings. The course emphasizes ethical research practices, critical thinking, and effective communication as students contribute meaningfully to an academic conversation.

Main Topics:
- Formulating research questions
- Conducting literature reviews
- Research design and methodology
- Data collection and analysis
- Ethical research practices
- Academic writing (4,000–5,000 word paper)
- Presentation and oral defense
- Process and Reflection Portfolio (PREP)

Learning Outcomes:
- Develop a focused, researchable question
- Summarize and synthesize scholarly sources
- Select and justify an appropriate method
- Collect and analyze data or evidence
- Evaluate findings and discuss implications
- Produce a formal academic research paper
- Present and defend their research
- Reflect on their research process ethically and effectively

US History

Prerequisites: Grade 9 History
Grade Levels: Grade 10–12
Course Description

This course examines the major events, debates, and movements that have shaped the United States from early colonization through the modern era. Students investigate multiple perspectives—especially those of historically marginalized groups—while analyzing how power, resistance, and identity have influenced American society. Through inquiry-driven projects and primary source analysis, students develop historical thinking, civic reasoning, and communication skills.

Main Topics
- Colonization & Indigenous Resistance
- Foundations of American Democracy
- Westward Expansion & Sectional Conflict
- Civil War & Reconstruction
- Industrialization & Reform Movements
- U.S. Foreign Policy & Global Power
- Civil Rights & Social Movements
- Contemporary Issues & Civic Inquiry

Learning Outcomes
- Analyze primary and secondary sources.
- Explain multiple perspectives on major U.S. events
- Formulate compelling and supporting historical questions
- Evaluate causes, effects, continuity, and change over time
- Construct evidence-based arguments
- Compare historical interpretations
- Assess how people and movements challenged systems of power
- Communicate conclusions through varied formats and media

AP Human Geography

Prerequisites: None
Grade Levels : Grade 11–12
Course Description

AP Human Geography introduces students to the systematic study of the patterns and processes that shape human understanding, use, and modification of Earth's surface. Students analyze spatial concepts, geographic models, and real-world data to understand socioeconomic organization and its environmental consequences. The course emphasizes geographic thinking and the tools and methods used by geographers in both academic and applied settings.

Main Topics
- Thinking Geographically
- Population and Migration Patterns
- Cultural Patterns and Processes
- Political Organization of Space
- Agriculture and Rural Land Use
- Urbanization and Cities
- Industrial and Economic Development
- Spatial Analysis Using Geographic Tools and Data

Learning Outcomes
- Analyze geographic theories, concepts, and models in applied contexts
- Interpret spatial patterns and relationships using maps, images, and geospatial data
- Evaluate population trends and migration processes at multiple scales
- Explain cultural, political, and economic forces shaping human organization of space.
- Assess environmental and societal impacts of land-use decisions
- Compare levels of urbanization and development across global regions
- Use geographic data (quantitative and qualitative) to draw conclusions about human activities
- Analyze how spatial processes create and respond to societal change

Sociology

Prerequisites: None
Grade Levels: Grade 10-12
Course Description

This course introduces students to the systematic study of

human societies, social interactions, and cultural patterns. Students explore how individuals both shape and are shaped by social institutions, norms, values, and historical forces. Through discussions, investigations, case studies, and collaborative inquiry, students develop the skills to analyze the social world and consider their role in creating a more just society.

Main Topics
- Foundations of Sociology & The Sociological Imagination
- Culture, Socialization, and Identity
- Social Interaction, Groups, and Institutions
- Deviance, Social Control, and Crime
- Inequality: Class, Race, Gender, and Power
- Research Methods, Fieldwork, and Data Interpretation
- Globalization, Social Change, and Continuity
- Contemporary Social Issues & Case Studies

Learning Outcomes:
- Apply key sociological concepts to real-world situations and current events
- Analyze how socialization shapes identity, behavior, and worldviews
- Interpret and evaluate sociological data, fieldnotes, and case studies
- Compare social institutions and explain their roles in shaping social life
- Explain major sociological theories and apply them to contemporary issues.
- Collaborate respectfully in discussions on sensitive and controversial topics
- Communicate sociological insights through written, oral, and multimedia formats
- Develop informed, empathetic, and proactive perspectives on global and local social issues

AP Psychology

Prerequisites: None
Grade Levels : Grade 10–12
Course Description

AP Psychology provides students with a comprehensive introduction to the scientific study of behavior and mental processes. Through exploring various psychological theories and principles, students develop critical thinking skills and an understanding of human behavior, preparing them for the AP exam and future studies in psychology.

Main Topics
- Introduction to Psychology: History and Approaches
- Research Methods in Psychology
- Biological Bases of Behavior
- Developmental Psychology
- Learning Theories and Behaviors
- Social Psychology and Personality
- Abnormal Psychology and Treatment Approaches
- Motivation and Emotion

Learning Outcomes
- Analyze psychological concepts and their applications to real-world scenarios
- Evaluate research methods and ethical considerations in psychological studies
- Understand the biological bases of behavior and mental processes
- Explore the stages of human development and their psychological implications
- Discuss major theories of learning and behavior modification.
- Examine social influences on behavior and group dynamics.
- Identify psychological disorders and their treatment options.
- Synthesize information from diverse psychological perspectives

IB Psychology

Prerequisites: None (recommended: interest in psychology and inquiry)
Grade Levels: Grade 11-12
Course Description

IB Psychology explores the intricate relationship between behavior and mental processes through a scientific lens, allowing students to critically examine psychological theories and research. The curriculum focuses on understanding human behavior from a biopsychosocial perspective, preparing students for both the IB examinations and further academic pursuits in psychology.

Main Topics
- Introduction to Psychology: Key Perspectives and Approaches
- Research Methods in Psychology
- Biological Psychology: Brain Function and Behavior
- Cognitive Psychology: Processes and Perspectives
- Developmental Psychology Across the Lifespan
- Abnormal Psychology: Diagnosis and Treatment
- Social Psychology: Group Behavior and Interaction
- Application of Psychology in Real-World Contexts

Learning Outcomes:
- Apply psychological theories to understand human behavior
- Conduct ethical research within psychological contexts
- Analyze and interpret psychological data from various studies
- Evaluate the influence of biological, cognitive, and social factors on behavior
- Discuss different approaches to understanding psychological disorders
- Examine the impact of social identity and group dynamics on behavior
- Communicate psychological concepts effectively in diverse formats
- Develop critical thinking and inquiry skills related to psychological practices

AP U.S. History

Prerequisites: None
Grade Levels: Grade 10–12
Course Description

AP U.S. History offers a rigorous exploration of the major events, themes, and developments that have shaped the United States from its founding to the present. Students enhance their historical thinking skills through analysis of primary and secondary sources, preparing for both the AP exam and further study in the field of history.

Main Topics
- Colonization and Indigenous Societies
- American Revolution and Independence
- The Formation of the U.S. Government
- Expansion and Sectional Conflict
- Civil War and Reconstruction
- Industrialization and Urban Society
- Civil Rights Movements and Social Change
- Contemporary America: Domestic and Foreign Policy

Learning Outcomes
- Analyze primary and secondary sources to construct historical narratives
- Evaluate the causes and effects of key events in U.S. history

- Compare historical developments across different time periods and regions
- Develop arguments supported by historical evidence
- Understand the complexity of historical interpretations
- Assess the impact of social movements and political changes
- Communicate historical analyses effectively in written and oral formats
- Demonstrate an understanding of the U.S. Constitution and its amendments

IB Business Management

Prerequisites: None (recommended: interest in business concepts and practices)
Grade Levels: Grade 11–12
Course Description

IB Business Management provides students with an understanding of business principles and practices through the analysis of real-world business scenarios. The course focuses on developing critical thinking and decision-making skills, encouraging students to explore the dynamic nature of the business environment and the impact of global factors on business operations.

Main Topics

- Business Organization and Environment
- Human Resource Management
- Finance
- Marketing
- Operations Management
- Business Management Tools
- Conceptual Foci: Change, Sustainability, Ethics, Creativity

Learning Outcomes

- Analyze and evaluate business activities using relevant theories and tools
- Understand how various internal and external factors influence business decisions and performance
- Develop effective business plans and strategies based on analytical data
- Assess the impact of global trends and local contexts on business operations
- Communicate business concepts effectively in written and oral formats
- Demonstrate the ability to think critically and solve business-related problems
- Collaborate in team settings to discuss and present business ideas
- Reflect on ethical issues and the responsibility of businesses in society

AP Economics

Prerequisites: None
Grade Levels: Grade 11–12
Course Description

AP Economics covers both microeconomic and macroeconomic concepts in an expedited format, providing students with a comprehensive understanding of economic principles and their application to real-world issues. This course emphasizes critical thinking and analytical skills, preparing students for the AP exam and further studies in economics.

Main Topics

- Basic Economic Concepts and Scarcity
- Supply and Demand
- Product and Factor Market
- Market Failure and the Role of Government
- Economic Indicators and the Business Cycle
- National Income, Price Determination, and the Financial Sector
- Fiscal and Monetary Policy Interventions
- International Trade and Finance

Learning Outcomes

- Apply microeconomic and macroeconomic theories to analyze real-world economic issues
- Interpret and evaluate economic data, graphs, and models
- Assess the impact of government policies on economic performance
- Analyze market dynamics and consumer behavior
- Understand the role of monetary and fiscal policies in the economy
- Develop critical thinking and problem-solving skills in economics
- Communicate economic concepts clearly using appropriate terminology and data
- Demonstrate responsible citizenship by understanding the implications of economic decisions on society

AP U.S. Government and Politics

Prerequisites: None
Grade Levels: Grade 11–12
Course Description

AP U.S. Government and Politics provides students with an in-depth understanding of the American political system, exploring the structures, processes, and principles that shape government and influence public policy. This course encourages critical analysis of political concepts and engagement with the complexities of the democratic process, fostering informed citizens who are equipped to participate in civic life.

Main Topics

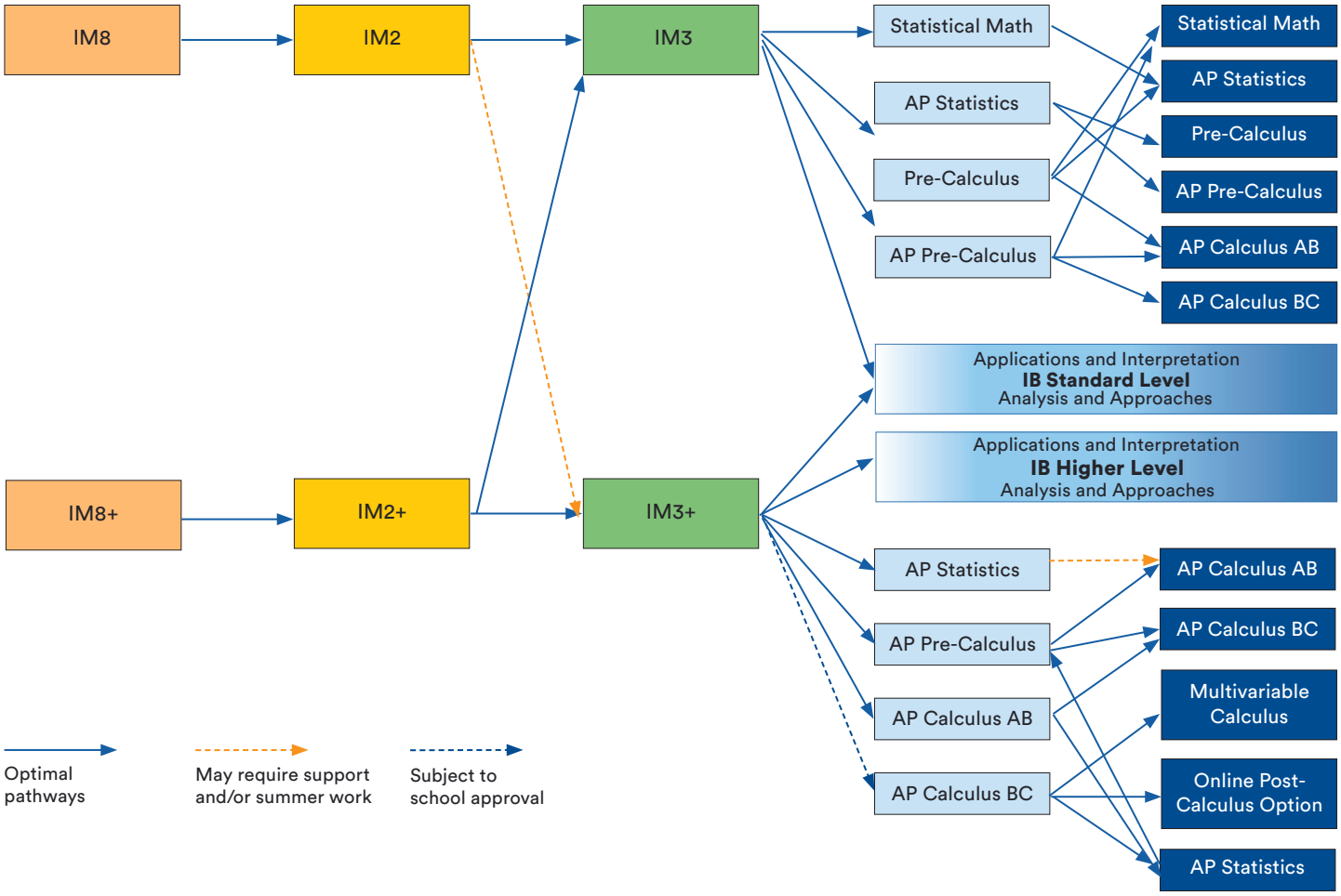
- Foundations of American Democracy
- The U.S. Constitution and Federalism
- Political Beliefs and Behaviors
- Political Parties, Interest Groups, and Mass Media
- Institutions of National Government (Congress, Presidency, Courts)
- Public Policy and Policymaking
- Civil Rights and Civil Liberties
- Current Events and Contemporary Issues in U.S. Politics

Learning Outcomes

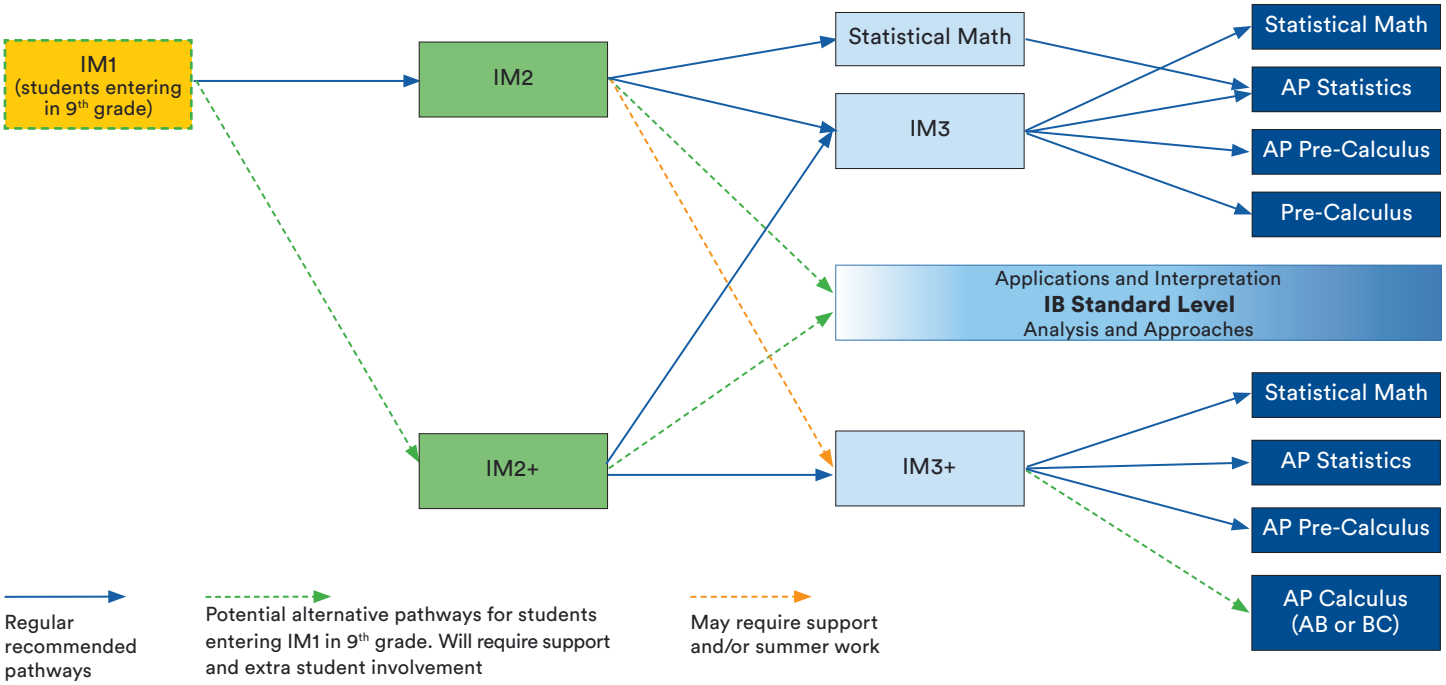
- Analyze and evaluate core political concepts, structures, and processes within the American political system.
- Understand the principles of the U.S. Constitution and the framework of federalism.
- Examine political behaviors, ideologies, and their impact on policy decisions.
- Develop critical thinking and analytical skills through the examination of political data and current events.
- Communicate effectively about governmental concepts and policies using appropriate political terminology.
- Assess the role of interest groups, political parties, and the media in shaping public opinion and policy.
- Engage in discussions about the implications of civil rights and civil liberties.
- Prepare for the AP exam while fostering skills that promote active citizenship and informed public engagement.

MATHEMATICS COURSES

Mathematics Department Flow Chart



Students entering IM1 in 9th grade (from Math 8 or external students)



The mathematics department offers a rich variety of programs, including both Advanced Placement (AP) and International Baccalaureate (IB), to meet the needs of its diverse student body.

College-bound students entering fields that do not require an extensive mathematics background may choose a pathway that includes courses from Integrated Mathematics, IB Mathematics: Applications and Interpretation SL, or Statistical Math. Students planning to pursue majors that demand a strong foundation in higher mathematics, such as engineering or the physical sciences, may follow a more rigorous sequence that includes AP Calculus (AB or BC), Multivariable Calculus, AP Statistics, and/or IB Mathematics: Analysis and Approaches HL. Since post-secondary institutions and programs often have specific mathematics course or credit requirements, students are encouraged to consult their college counselor and review the admissions guidelines of individual universities for the most up-to-date information.

All SAS students are encouraged to take mathematics during all four years of high school. However, only three years of mathematics (3 credits) are required for graduation.

Key factors for successful completion of any high school mathematics course include maintaining consistent attentiveness during instruction, completing classwork and homework thoroughly and in a timely manner, proactively seeking assistance from teachers and peers when necessary, asking questions to ensure conceptual clarity, actively participating in class discussions, and collaborating effectively with classmates.

New Student Placement Procedure

A student's math placement and subsequent course sequence may be based on the following:

- The student's grades in previous and/or current math courses
- MAP math score
- Recommendation from the current or previous math teacher
- The student's performance on the SAS math placement test

Math Course Prerequisites

Students must meet the prerequisites to enroll in any math course. Students who do not meet the prerequisites should discuss options with their current teacher and counselor. Details regarding this process are outlined in the Student Handbook.

Note:

1. All students are required to complete three credits of mathematics in order to graduate. One credit equals a year-long high school course. One semester of successfully completing a math course equals half a credit.
2. All students who do not already own a graphing calculator should purchase a TI Nspire calculator.
3. All students enrolled in an AP mathematics course must sit the external (AP) exam in May of the current academic year.
4. All students enrolled in an IB mathematics course must take the external (IB) exam at the end of year 2.

Integrated Math 1 (IM1)

Prerequisites: Pre-Algebra or Math 8
Grade Levels: Grade 9
Course Description

Integrated Mathematics 1 is the introductory course in the Integrated Mathematics sequence. It develops algebraic reasoning (including equations, inequalities, and systems), linear relationships, and foundational geometry while emphasizing mathematical modeling, basic statistical reasoning, and problem solving. Students use tables, graphs, equations, and technology to represent and analyze patterns and realworld situations.

Main Topics

- Linear equations, inequalities, and systems (solving, graphing, algebraic manipulation, applications)
- Functions and linear relationships (tables, graphs, equations, function notation, transformations, rewriting formulas)
- Mathematical modeling and decisionmaking with algebraic models (realworld problems)
- Coordinate geometry and twodimensional measurement (distance, midpoint, perimeter, area, Pythagorean theorem, similarity/scale)
- Congruence, transformations, and triangle proofs (SAS, SSS, ASA, AAS, HL)
- Data analysis and introductory probability (measures of center/variation, distributions, box plots)

Learning Outcomes

- Solve and interpret linear equations, inequalities, and systems using algebraic and graphical methods in contextual problems.
- Represent and analyze linear relationships using tables, graphs, function notation, transformations, and formula manipulation.
- Model realworld decision problems with algebraic and graphical techniques, compare options, and justify choices.
- Apply coordinate geometry tools and twodimensional measurement (distance, midpoint, perimeter, area), including the Pythagorean theorem and similarity/scale, to solve problems.
- Prove and use triangle congruence theorems and describe effects of transformations on figures.
- Analyze data using measures of center and variation, boxandwhisker plots, distribution shapes, and apply basic probability with fractions.

Integrated Math 2 (IM2)

Prerequisites: Integrated Mathematics 1 or Algebra 1
Grade Levels: Grade 9 and 10
Course Description

Integrated Mathematics 2 builds on prior algebra skills to develop reasoning and functional fluency. Students study linear, quadratic, exponential, and radical relationships, systems of equations, and advanced factoring, then apply these concepts to solve related problems. The course also introduces formal work with functions, trigonometry, geometric proofs, and probability and statistics to prepare students for Integrated Mathematics 3.

Main Topics

- Quadratic and exponential functions (tables, graphs, equations)
- Trigonometric relationships and right-triangle trigonometry
- Introduction to trigonometric identities and proofs
- Irrational and complex (imaginary) numbers
- Similarity and circle theorems (introductory proofs)
- Compound events and conditional probability
- Data modeling and use of statistics to build models
- Applying functions and models to contextual problem solving

Learning Outcomes
- Represent and analyze quadratic, exponential, and trigonometric functions in multiple forms.
- Solve right-triangle trigonometry problems and apply trigonometric ratios in real-world situations.
- Use and begin to prove trigonometric identities and basic geometric theorems.
- Manipulate irrational and complex numbers in algebraic contexts.
- Calculate probabilities for compound and conditional events.
- Build and interpret mathematical models from data to inform decisions.
- Apply functions and transformations to solve contextual problems.
- Communicate mathematical reasoning and justify solutions using appropriate representations.

Integrated Math 2+ (IM2+)

Prerequisites: Integrated Mathematics 1 or Algebra 1 and Geometry
Grade Levels: Grade 9
Course Description

Integrated Mathematics 2+ extends the IM2 content with a deeper exploration of functions, trigonometry, and probability while introducing advanced topics for stronger preparation in higher mathematics. Students analyze quadratic, exponential, trigonometric, polynomial, and rational functions, study conic sections and the unit circle, and apply mathematical reasoning in the context of modeling.

Main Topics
- Quadratic, exponential, polynomial, and rational functions
- Trigonometric functions and identities
- Conic sections
- Matrices
- Advanced probability and counting techniques
- Complex numbers
- Data modeling and statistical analysis
- Mathematical reasoning, applications, and proofs

Learning Outcomes
- Represent and analyze a variety of functions in graph, table, and algebraic form.
- Apply trigonometric concepts and identities to solve problems.
- Analyze and classify conic sections and solve related problems.
- Utilize matrices for modeling and problem-solving.
- Compute probabilities for compound and conditional events and apply counting methods.
- Work with polynomial and rational expressions and solve related equations.
- Build and interpret mathematical models from data to make informed decisions.
- Construct and communicate mathematical arguments and proofs

Integrated Math 3 (IM3)

Prerequisites: Integrated Mathematics 2 or Algebra 1 and Geometry
Grade Levels: Grade 10–11
Course Description

Integrated Mathematics 3 develops advanced function and trigonometric skills while reinforcing datadriven modeling and statistical reasoning. Students study polynomial, rational, radical, exponential, logarithmic, and trigonometric relationships and apply these concepts to solve contextual problems.

Main Topics
- Polynomial and rational functions (graphs, equations, tables)
- Radical and exponential functions
- Trigonometry for general triangles and the unit circle
- Trigonometric equations and identities
- Statistics with emphasis on inference and sampling
- Data modeling and interpretation
- Mathematical modeling across contexts
- Problem solving with multiple representations of functions

Learning Outcomes
- Analyze and represent polynomial, rational, radical, and exponential functions.
- Solve trigonometric problems for general triangles using laws of sines and cosines and the unit circle.
- Manipulate and solve trigonometric equations and apply identities.
- Conduct basic statistical inference and interpret results from data.
- Build and evaluate mathematical models using real data.
- Use multiple representations (graphs, tables, equations) to solve problems.
- Apply function concepts to contextual and realworld situations.
- Communicate mathematical reasoning and justify solutions.

Integrated Math 3+ (IM3+)

Prerequisites: Integrated Mathematics 2 or Algebra 1 and Geometry
Grade Levels: Grade 9
Course Description

Integrated Mathematics 3+ offers a deeper, more rigorous exploration of functions, trigonometry, and statistics, while continuing to emphasize mathematical modeling and realworld application. Students extend work with previously introduced functions and trigonometric relationships and study advanced topics such as rational, radical, exponential, logarithmic, and trigonometric functions, and vectors.

Main Topics
- Manipulation of functions (composite and inverse)
- Analysis of functions (polynomial, rational, radical, exponential, and logarithmic)
- Advanced trigonometry (unit circle, identities, trigonometric equations)
- Trigonometry for general triangles (laws of sines & cosines)
- Introduction to vectors
- Statistics with emphasis on statistical inference and data modeling
- Mathematical modeling and application across contexts

Learning Outcomes
- Analyze and manipulate functions.
- Model, solve and apply equations for problem solving purposes.
- Solve and apply trigonometric equations and use identities in problem solving.
- Apply trigonometric methods to general triangles and unit circle contexts.
- Interpret data and perform basic statistical inference to build models.
- Use vectors for introductory modeling and problem solving.
- Construct and evaluate mathematical models across varied contexts.
- Communicate and justify reasoning using multiple representations.

Statistical Math

Prerequisites: Integrated Mathematics 2
Grade Levels: Grade 11 and 12
Course Description

Statistical Math introduces students to practical statistical methods with an emphasis on realworld applications and datadriven reasoning. The course blends core topics – descriptive measures, probability, sampling distributions, confidence intervals, and hypothesis testing – with applied tools such as simulation, regression, chisquare methods, and resampling. Students use data to build, test, and communicate mathematical models, learning to interpret results and report conclusions in clear, everyday language. Note: Offering of this course is subject to student enrollment.

Main Topics

- Descriptive statistics and data visualization
- Probability fundamentals and counting methods
- Discrete and continuous probability distributions
- Sampling distributions and the Central Limit Theorem
- Confidence intervals and margin of error
- Hypothesis testing (means, proportions)
- Regression, correlation, and basic inference for lines
- Chisquare methods; simulation and resampling

Learning Outcomes

- Describe and summarize data using appropriate graphical displays and measures.
- Compute probabilities using basic rules, conditional probability, and counting techniques.
- Apply common probability distributions to solve problems.
- Explain sampling variability and justify conclusions drawn from samples.
- Construct and interpret confidence intervals for means and proportions, stating conditions.
- Perform and interpret hypothesis tests, report pvalues, and discuss errors.
- Fit and interpret leastsquares regression lines and assess relationships with residuals.
- Use simulation and resampling methods to support inference and understand variability.

Pre-Calculus

Prerequisites: Integrated Mathematics 3 or Integrated Mathematics 3+ or Algebra 2
Grade Levels: Grade 11 and 12
Course Description

PreCalculus prepares students for advanced mathematics by deepening and extending prior work on functions, trigonometry, and analytic topics through algebraic, numerical, and graphical approaches. The course emphasizes rigorous problem solving and the use of a graphing calculator to model and analyze mathematical situations.

Main Topics

- Polynomial, rational, and radical functions
- Exponential and logarithmic functions
- Trigonometric functions and identities (unit circle, identities, equations)
- Conic sections
- Matrices and linear programming applications
- Function transformations, inverses, and composition
- Graphical, numeric, and algebraic solution methods (graphing calculator required)
- Mathematical modeling and problem solving

Learning Outcomes

- Analyze and graph a wide variety of functions and describe their behavior.
- Solve and apply exponential and logarithmic equations in context.
- Use trigonometric tools (unit circle, identities, equations) to model and solve problems.
- Classify and work with conic sections and their equations.
- Apply matrices and linear programming to solve optimization and modeling problems.
- Perform function composition and find inverses to solve applied tasks.
- Use algebraic, numeric, and graphical approaches (including a graphing calculator) to justify solutions.
- Communicate mathematical reasoning clearly and accurately.

AP Pre-Calculus

Prerequisites: Integrated Mathematics 3 or Integrated Mathematics 3+ or Algebra 2
Grade Levels: Grade 11 and 12
Course Description

AP PreCalculus develops deep mastery of functions and mathematical modeling through multiple representations and rigorous practice. Students construct, analyze, and validate function models (graphical, numerical, verbal, and analytical) to solve contextual and abstract problems and build procedural and symbolic fluency for higherlevel mathematics.

Main Topics

- Function families: polynomial, rational, exponential, logarithmic, trigonometric
- Multiple representations of functions (graphical, numerical, verbal, analytic)
- Function modeling and validation with real data and scenarios
- Equation solving and equivalent analytic representations
- Function transformations, inverses, and composition
- Trigonometric functions, unit circle, and identities
- Problem solving with graphical, numeric, and symbolic methods
- Preparation for advanced mathematics through procedural fluency

Learning Outcomes

- Model realworld scenarios using appropriate function types and justify choices.
- Translate seamlessly between graphical, numerical, verbal, and analytical representations.
- Solve equations and construct equivalent analytic forms in context and abstract settings.
- Analyze function behavior and transformations to interpret results accurately.
- Apply trigonometric concepts and identities in modeling and problem solving.
- Demonstrate procedural and symbolic fluency needed for calculuslevel work.
- Validate and refine mathematical models using data and conditions.
- Communicate mathematical reasoning clearly across representations.

AP Calculus AB

Prerequisites: AP PreCalculus or Integrated Mathematics 3+
Grade Levels: Grade 11 and 12
Course Description

AP Calculus AB covers foundational calculus concepts equivalent to a firstsemester college course, focusing on limits, derivatives, and integrals and their applications. Students develop analytical and problemsolving skills through algebraic, graphical, numerical, and contextual approaches and prepare for the AP external exam.

Main Topics

- Limits and continuity
- Derivatives of algebraic and transcendental functions
- Differentiation techniques, optimization, and related rates
- Antidifferentiation, indefinite integrals, Riemann sums, and definite integrals
- Differential equations
- Areas of planar regions and volumes of solids of revolution

Learning Outcomes

- Evaluate limits analytically, graphically, and numerically; determine continuity; and use limits to describe local behavior and justify conclusions.
- Compute derivatives of algebraic, exponential, logarithmic, and trigonometric functions; interpret derivatives as rates of change; and apply differentiation rules accurately.
- Analyze graphs using derivatives—extrema, monotonicity, concavity, inflection points—and apply derivative techniques to optimization, related rates, and motion.
- Evaluate definite and indefinite integrals, use basic substitution, use Riemann sums to estimate definite integrals, interpret integrals as accumulation functions, and apply the Fundamental Theorem of Calculus.
- Solve separable differential equations, interpret solutions graphically, and use slope fields to model dynamic behavior.
- Compute area under curves, net change, volumes using disk and washer methods, and apply integrals to physical and geometric modeling.
- Construct clear reasoning, justify steps using calculus definitions and theorems, and interpret results in meaningful real-world or theoretical settings.

AP Calculus BC

Prerequisites: AP PreCalculus with A or above, or Integrated Mathematics 3+ with B+ or above, or AP Calculus AB
Grade Levels: Grade 10, 11 and 12
Course Description

AP Calculus BC is an accelerated, yearlong course covering the full BC syllabus—equivalent to two semesters of college calculus—extending AP Calculus AB topics with advanced integration techniques, polynomial approximations and series, and study of parametric, polar, and vector functions. Students develop procedural fluency and conceptual understanding through analytic, graphical, numerical, and contextual approaches while preparing for the AP BC external exam.

Main Topics

- Limits, continuity, and derivatives
- Techniques and applications of differentiation (optimization, related rates)
- Definite integrals, Riemann sums, and advanced integration techniques
- Improper integrals and further applications of integrals (areas, volumes)
- Differential equations and Euler's Method
- Polynomial approximations and infinite series (Taylor/Maclaurin)
- Parametric, polar, and vector functions (analysis of planar curves)
- Numerical methods and modeling with calculus

Learning Outcomes

- Evaluate limits analytically, graphically, and numerically, determine continuity, and use limits to justify behavior of functions.
- Compute derivatives of algebraic, exponential, logarithmic, trigonometric, parametric, polar, and vector-valued functions, interpret derivatives as rates of change, and apply them to optimization, related rates, and motion.
- Analyze function behavior using derivatives—intervals of increase/decrease, extrema, concavity, inflection points—and justify conclusions using derivative tests.
- Evaluate definite and indefinite integrals by using substitution, integration by parts, and numerical integration when needed, and interpret integrals as accumulation functions and net change.
- Solve separable differential equations, interpret slope fields, apply logistic and exponential growth models, and implement Euler's Method for approximations.
- Compute areas, volumes (disk/washer/shell), lengths, surface area, and use integrals in modeling situations involving accumulation, motion, and physical quantities.
- Build and use Taylor and Maclaurin polynomials, test infinite series for convergence, represent functions as power series, and apply series to approximation problems.
- Analyze curves defined parametrically or in polar form, compute derivatives and areas/arc lengths, and model motion using vector-valued functions.

AP Statistics

Prerequisites: Integrated Mathematics 3
Grade Levels: Grade 11 and 12
Course Description

AP Statistics is a rigorous year-long course that allows students to investigate real-world questions using real data. The curriculum focuses on four unifying themes: exploring data, designing studies, modeling chance with simulation and probability, and statistical inference. Students learn practical methods for collecting, analyzing, and interpreting data. Emphasizing inquiry and effective use of technology, the course develops competence in sampling, probability models, regression, and hypothesis testing to prepare students for college, careers, and informed decisionmaking.

Main Topics

- Exploring and summarizing one and twovariable data
- Designing studies and sampling methods
- Probability and simulation
- Inference and hypothesis testing for proportions, means, and differences
- Confidence intervals for means and proportions
- Regression, correlation, and modeling relationships
- Chisquare and categorical inference
- Interpreting and communicating statistical results

Learning Outcomes

- Summarize data using appropriate graphs and statistics.
- Design valid studies and select appropriate sampling methods.
- Model chance with probability and simulation.
- Understand sampling distributions and use them for inference.

- Construct and interpret confidence intervals for parameters.
- Conduct hypothesis tests and interpret results, including Type I/II error implications.
- Fit and evaluate regression models and interpret parameters.
- Select inference procedures and communicate evidencebased conclusions.

Multivariable Calculus

Prerequisites: AP Calculus BC and teacher recommendation
Grade levels: Grade 11 and 12
Course Description

Multivariable Calculus is a rigorous, collegelevel course extending singlevariable calculus to functions of two or more variables, with applications across physics, engineering, and economics. Students study vectors and the geometry of space, vector-valued functions, functions of several variables, multiple integration, and vector analysis while using a graphing calculator for modeling and computation.

Main Topics:

- Vectors and geometry of space
- Vectorvalued functions and motion in space
- Functions of several variables and surfaces
- Limits, continuity, and partial derivatives
- Gradients, directional derivatives, and optimization
- Multiple (double and triple) integrals
- Vector fields and line/surface integrals
- Theorems of vector calculus

Learning Outcomes:

- Represent and manipulate vectors, work with dot and cross products, analyze lines and planes, compute distances/angles, and interpret geometry in three dimensions.
- Analyze functions of several variables, interpret level curves and surfaces, and describe multivariable behavior using contour plots and 3D representations.
- Evaluate multivariable limits, determine continuity, compute partial derivatives, and interpret them as rates of change in specific directions.
- Compute gradients, directional derivatives, and apply them to constrained and unconstrained optimization, including Lagrange multipliers.
- Evaluate double and triple integrals in Cartesian, polar, cylindrical, and spherical coordinates, and apply them to area, volume, mass, and density problems.
- Analyze curves in space, compute velocity, acceleration, tangential and normal components, arc length, curvature, and apply these to motion and geometry.
- Analyze vector fields, compute line integrals and surface integrals, and interpret physical quantities such as work, flux, and circulation.
- Apply Green's Theorem, Stokes' Theorem, and the Divergence Theorem to connect line, surface, and volume integrals and justify relationships between them.

IB Mathematics:

Application and Interpretation SL (Y1-Y2)

Prerequisites: Integrated Mathematics 2
Grade levels: Grade 11–12 (two-year program)
Course Description

A two-year course focused on practical mathematics for students whose primary interests lie outside math and physical sciences; it emphasizes modeling, statistics, and applications in real contexts while developing communication through a mathematical exploration. Students use technology (TINSpire required) to investigate functions, probability, statistics, finance, and introductory calculus.

Main Topics:

- Functions: Types, Analysis, and Modelling
- Sequences, Series, and Financial Mathematics
- Data Analysis and Descriptive Statistics
- Probability and Statistical Modelling
- Geometry, Mensuration, and Spatial Reasoning
- Optimization and Linear Programming
- Differential and Integral Calculus
- Mathematical Exploration and Technological Applications

Learning Outcomes:

- Apply various types of functions and sequences to model real-world phenomena.
- Analyze and interpret data using a range of statistical and probabilistic methods.
- Solve financial problems involving sequences, series, and interest.
- Utilize geometric and trigonometric principles for spatial problem-solving.
- Formulate and solve optimization problems, including linear programming.
- Apply differential and integral calculus to solve problems in context.
- Conduct and present a comprehensive mathematical exploration (Internal Assessment).
- Communicate mathematical ideas clearly and effectively, leveraging technology for modeling and analysis.

IB Mathematics:

Application and Interpretation HL (Y1-Y2)

Prerequisites: Integrated Mathematics 3+ or Integrated Mathematics 3 and teacher recommendation
Grade levels: 11–12 (two-year program)
Course Description

A rigorous twoyear HL course for students with strong mathematical backgrounds that extends SL topics with a deeper study of calculus, advanced functions, and algebraic structures. Students develop advanced modeling, statistical, and analytical skills (with a required TINSpire) and complete a written mathematical exploration emphasizing precise communication.

Main Topics:

- Numbers, Complex Numbers, and Proof
- Advanced Functions and Models
- Vectors and Matrices
- Differential Calculus: Methods and Applications
- Integral Calculus and Differential Equations
- Advanced Probability and Distributions
- Statistical Inference and Hypothesis Testing
- Discrete Mathematics, Optimization, and Mathematical Inquiry

Learning Outcomes:

- Apply and interpret advanced functional analysis, including limits, continuity, and inverse relationships, to model complex systems.
- Perform operations with complex numbers in various forms and apply advanced algebraic and proof techniques.
- Utilize vector and matrix methods for geometric transformations, solving systems of equations, and modeling multi-dimensional problems.
- Apply advanced differential calculus techniques to model and solve complex problems, including optimization and rates of change.
- Employ advanced integral calculus to determine areas, volumes, and solve differential equations in applied contexts.
- Design and conduct comprehensive statistical analyses, including hypothesis testing and the use of various probability distributions, to draw valid conclusions.
- Apply discrete mathematical methods and advanced optimization techniques to solve practical problems.
- Plan, execute, and communicate a rigorous individual mathematical investigation (IA), demonstrating advanced modeling and problem-solving skills using technology.

IB Mathematics: Analysis and Approaches SL (Y1-Y2)

Prerequisites: Integrated Mathematics 3
Grade levels: Grade 11–12 (two-year program)
Course Description

A twoyear course for students with a solid mathematics background that develops rigorous analytical and calculus skills for further study in mathematics, engineering, physical sciences, and economics. Students study algebra, functions, trigonometry, probability/statistics, and differential & integral calculus while producing a written mathematical exploration and practicing precise mathematical communication (TINSpire required).

Main Topics

- Algebra, functions, and equations
- Circular functions and trigonometry (unit circle, identities)
- Differential calculus and applications
- Integral calculus and applications
- Probability and statistics fundamentals
- Complex problem solving with multiple representations
- Mathematical exploration (investigative project)
- Technologyassisted modeling (TINSpire)

Learning Outcomes

- Analyze and manipulate functions and solve related equations.
- Apply trigonometric methods to solve problems and model periodic behavior.
- Compute derivatives and integrals and use them in applied contexts.
- Use probability and basic statistical tools to interpret data.
- Model problems using algebraic, graphical, and numerical approaches with technology.
- Complete a coherent mathematical exploration demonstrating reasoning and communication.
- Justify solutions and present mathematical arguments precisely.

IB Mathematics: Analysis and Approaches HL (Y1–Y2)

Prerequisites: Integrated Mathematics 3+ or Integrated Mathematics 3 and teacher recommendation
Grade levels: Grade 11–12 (two-year program)
Course Description

A rigorous twoyear HL course for students with strong mathematical backgrounds who plan university study in mathematics, technology, or physical sciences. In addition to SL topics, the course extends study of functions, calculus, and statistics to greater depth and adds complex numbers, polar form, and vectors; students complete a written mathematical exploration and emphasize precise mathematical communication (TINSpire required).

Main Topics

- Advanced algebra, functions and equations
- Differential and integral calculus (HL depth and applications)
- Complex numbers and their geometric/polar representations
- Vectors and vector geometry
- Probability and statistics (advanced inference and modeling)
- Trigonometry and circular functions (unit circle and identities)
- Discrete mathematics and sequences and series
- Mathematical exploration (individual investigative project)

Learning Outcomes

- Analyze, transform, and model advanced functions, solve complex equations, and justify conclusions using algebraic reasoning.
- Differentiate and integrate advanced functions, solve differential equations, use a Taylor series to approximate a function, and apply calculus methods to real-world situations and abstract models.
- Perform operations in both Cartesian and polar form, interpret complex numbers geometrically, apply De Moivre's theorem, and solve polynomial equations using complex roots.
- Represent and manipulate vectors, work with lines and planes in 3D, determine intersections and distances, and apply vector methods to geometric problems.
- Analyze data, apply conditional probability rules, work with standard distributions, interpret statistical models, and make supported inferences from data.
- Use the unit circle, prove and apply trigonometric identities, solve trigonometric equations, and model periodic phenomena accurately.
- Analyze sequence behavior, use recurrence relations, prove statements using mathematical induction, and apply discrete methods to problem solving.
- Investigate a mathematical idea independently, demonstrate depth of understanding, communicate clearly, and reflect on the mathematical process.

SCIENCE COURSES

Science Department Flow Chart

All Grade 9 students must enroll in:

Physics/Chemistry Lab Science

All Grade 10 students may choose any of the courses below based on meeting prerequisites

Biology Lab Science

AP Biology *
* Grade 10 students must score 90% on entry exam

All Grade 11 students may choose any of the courses below based on meeting prerequisites:

Chemistry

Earth & Space Science

IB Chemistry SL/HL
(two-year course)

IB Physics SL/HL
(two-year course)

IB Biology SL/HL
(two-year course)

IB Environmental System & Societies SL
(two-year course)

AP Biology

AP Physics 1

AP Physics C: Mechanics

AP Chemistry *
* students without chemistry prerequisite must score 90% on entry exam

AP Environmental Science

All Grade 12 students may choose any of the courses below based on meeting prerequisites:

Chemistry

Earth & Space Science

AP Chemistry

AP Environmental Science

AP Biology

AP Physics 1

AP Physics C: Mechanics

AP Physics C: Electricity and Magnetism

IB Chemistry SL/HL
(two-year course)

IB Physics SL/HL
(two-year course)

IB Biology SL/HL
(two-year course)

IB Environmental System & Societies SL
(two-year course)

Legend

- AP course
- IB course
- SAS course

INTRODUCTION

In the Science Department, students are introduced to chemistry, physics, and biology during the first two years in courses that are aligned with the Next Generation Science Standards. In Grade 9, students take Physics/Chemistry Lab Science, and in Grade 10, students take Biology Lab Science.

Our model gives students the opportunity to experience all three sciences before making their science choices in Grades 11 and 12. In order to graduate from SAS, students must earn a minimum of three science credits; most SAS students graduate with at least four science credits. The SAS science curriculum helps students to develop problem-solving, critical thinking, and analytical skills in a lab-based setting. Technology is integrated into the classroom and lab, and is a tool that aids students in data collection, data processing, and communicating their understanding of scientific concepts. The science offerings include a range of courses to provide opportunity for all high school students to develop a variety of skills and interest within the scope of the science disciplines.

Students enrolled in IB courses remain with the same teacher over the course of two years in Grades 11 and 12. AP science students must take the AP exam in May.

Physics/Chemistry Lab Science

Grade level: Grade 9

Course Description

This foundational course introduces students to key ideas in physics and chemistry while building confidence with scientific thinking and problem solving. Students investigate everyday phenomena through guided inquiry, collaborative activities, and data-rich tasks that emphasize clear reasoning and communication. The course also prepares students for future high school science courses by developing core skills such as modeling, graphing, and interpreting experimental results.

Main Topics

- Scientific measurement and data representation
- Structure of matter and chemical reactions
- Forces, motion, and energy
- Waves, sound, and simple applications of light

Learning Outcomes

- Design and carry out basic investigations to answer scientific questions.
- Represent data with appropriate graphs and use them to support a claim.
- Explain everyday physical and chemical phenomena using core scientific ideas.
- Work productively in lab groups while following safety and collaboration norms

Biology Lab Science

Grade level: Grade 10

Course Description

Biology Lab Science introduces students to the study of living systems, from molecules and cells to organisms and ecosystems. Students use models, case studies, and other types of labs to explore how structures relate to function and how genetic information shapes populations over time. Throughout the year, students connect biological concepts to health, environment, and global challenges.

Main Topics

- Cells and cellular processes
- Genetics and heredity
- Evolution and natural selection
- Ecosystems and biodiversity

Learning Outcomes

- Explain how cellular processes support life in organisms.
- Use evidence to predict patterns of inheritance and variation in populations.
- Describe how natural selection can lead to changes in species over time.
- Analyze how human actions influence local and global ecosystems.

Chemistry

Grade levels: Grade 11–12

Course Description

Chemistry provides a yearlong study of matter, its structure, and its transformations in a variety of real-world contexts. Students work with particulate models, quantitative problem solving, and a range of experimental techniques to deepen their understanding of chemical behavior. The course strengthens students' analytical skills and prepares them for further study in the sciences.

Main Topics

- Atomic structure and periodic trends
- Chemical bonding and intermolecular forces
- Stoichiometry and chemical reactions
- Energetics, equilibrium, and acid–base concepts

Learning Outcomes

- Use atomic and molecular models to explain patterns in the periodic table.
- Predict the products and relative extent of chemical reactions using balanced equations.
- Interpret experimental data to determine quantities such as concentration, yield, and energy change.
- Communicate chemical reasoning clearly in words, symbols, and diagrams.

Earth & Space Science

Grade levels: Grade 11–12

Course Description

Earth & Space Science uses observations, models, and case studies to explore the history and dynamics of Earth and the universe. Students examine how evidence from rocks, fossils, and seismic waves, informs our understanding of planetary processes whilst astronomical data informs about cosmic evolution. The course encourages students to consider how our understanding of nature develops and how Earth systems influence human societies and vice versa.

Main Topics

- Development of the modern model of the solar system
- Observations of the universe
- Origin and evolution of the universe and stars
- Earth's formation, internal structure, and plate tectonics
- Geologic time, rocks, and fossils
- Earth systems and natural hazards

Learning Outcomes

- Examine and explain the evolution of the solar system.
- Interpret astronomical knowledge and data to explain the Big Bang.
- Relate astronomical observations to models of star life cycles and cosmic evolution.
- Interpret data from multiple sources to reconstruct events in Earth's history.
- Explain how plate tectonics accounts for earthquakes, volcanoes, and mountain building.
- Evaluate how human decisions interact with natural hazards and Earth systems.

AP Biology

Prerequisites: Biology or 90% on a placement test and Grade 9 science teacher recommendation

Grade levels: Grade 11 –12

Course Description

AP Biology is an advanced course that mirrors an introductory university biology sequence with an emphasis on conceptual understanding and scientific practices. Students investigate core ideas such as evolution, cellular energetics, information flow, and ecological interactions through inquiry-based labs, data analysis, and scientific writing. The course supports students who are curious about living systems and interested in health, environmental science, or life science pathways.

Main Topics

- Cell structure, function, and communication
- Cellular energetics and metabolism
- Gene expression, regulation, and heredity
- Evolution, ecology, and ecosystem dynamics

Learning Outcomes

- Use experimental evidence to support or refute biological claims.
- Connect processes at the molecular and cellular level to organismal function.
- Apply evolutionary reasoning to explain patterns of diversity and adaptation.
- Analyze complex biological scenarios using quantitative and graphical tools.

AP Chemistry

Prerequisites: IM3, Chemistry or 90% on a placement test and Grade 10 science teacher recommendation

Grade levels: Grade 11–12

Course Description

AP Chemistry is an advanced course equivalent to a first-year university general chemistry sequence. Students deepen their understanding of structure, bonding, energetics, and change through rigorous problem solving and multi-step investigations. Frequent work with particulate representations, data, and mathematical models helps students connect theory with experimental evidence and applications.

Main Topics

- Structure of atoms, ions, and molecules
- Intermolecular forces and properties of substances
- Chemical reactions, kinetics, and equilibrium
- Acid-Base chemistry and buffers
- Thermodynamics and electrochemistry

Learning Outcomes

- Translate between particulate models, symbolic equations, and macroscopic observations.
- Plan and justify procedures to test a chemical question and interpret resulting data.
- Use quantitative reasoning to predict the direction and extent of chemical processes.
- Construct written arguments that link chemical models to experimental evidence.

AP Physics 1

Prerequisites: IM3 or IM3+

Grade levels: Grade 11–12

Course Description

AP Physics 1 is a first-year physics course focusing on developing strong conceptual and quantitative understanding of core mechanics topics. Students explore motion, forces, energy, and rotation through experiments, simulations, and problem solving that foreground reasoning and representation. The course is well suited for students who want a deep introduction to physics and who may pursue further study in science or engineering.

Main Topics

- One- and two-dimensional kinematics
- Forces, Newton's laws, and circular motion
- Energy, work, and power
- Momentum and collisions
- Rotational kinematics and dynamics

Learning Outcomes

- Represent physical situations with graphs, diagrams, and algebraic relationships.
- Apply Newton's laws to analyze forces and predict motion.
- Use conservation principles to solve multi-step mechanics problems.
- Evaluate experimental data to identify patterns, sources of error, and reasonable conclusions.

AP Environmental Science

Grade levels: Grade 11–12

Course Description

AP Environmental Science examines the underlying scientific principles of environmental systems and current environmental issues. Students study ecosystems, resources, and human impacts while analyzing case studies from global contexts. The course emphasizes data interpretation, systems thinking, and consideration of trade-offs in environmental decision making.

Main Topics

- Ecosystem structure, function, and services
- Populations, biodiversity, and conservation
- Earth systems and resources, and human impacts

Learning Outcomes

- Analyze environmental data and case studies to identify patterns and trends.
- Explain how biological and physical processes shape ecosystems and resources.
- Evaluate the benefits and consequences of different environmental solutions.

AP Physics C: Mechanics

Pre-requisite or Co-requisite: Calculus-based math (AP Calculus, IB AA HL)

Grade levels: Grade 11–12

Course Description

AP Physics C: Mechanics is a calculus-based physics course that models a first-semester university physics class for science and engineering majors. Students revisit kinematics, dynamics, energy, and rotation using differential and integral calculus to derive relationships and solve challenging problems. The course is intended for mathematically prepared students who want a rigorous, fast-paced treatment of mechanics and its real-world applications.

Main Topics

- One- and two-dimensional motion with calculus
- Forces, work, and energy in particle systems
- Momentum, collisions, and center of mass
- Rotation, torque, and angular momentum

Learning Outcomes

- Formulate and solve mechanics problems using calculus-based models.
- Derive key results in mechanics starting from fundamental principles.
- Use free-body and system diagrams to analyze complex interactions.
- Interpret solutions in physical terms and assess their reasonableness.

AP Physics C: Electricity & Magnetism

Prerequisites: AP Physics C: Mechanics

Grade level: Grade 12

Course Description

AP Physics C: Electricity and Magnetism extends calculus-based physics into electric and magnetic phenomena, building on ideas from AP Physics C: Mechanics. Students develop field, potential, and circuit models and apply Maxwell's framework to a range of physical situations. The course supports students interested in engineering, physics, or related quantitative fields.

Main Topics

- Electrostatics, electric fields, and potential
- Conductors, capacitors, and dielectrics
- Direct-current circuits involving resistors, capacitors, and inductors
- Magnetic fields, induction, and electromagnetic phenomena

Learning Outcomes

- Use calculus to relate electric field, potential, and charge distributions.
- Analyze multi-loop circuits involving resistors, capacitors, and inductors using conservation laws.
- Apply field and force ideas to predict motion and energy changes in charges and currents.
- Connect experimental observations to the underlying laws of electromagnetism.

IB Biology SL/HL Y1-Y2

Grade levels: Grade 11–12 (two-year course)

Course Description

IB Biology engages students in the study of living systems across scales, from molecules and cells to organisms and ecosystems. Over two years, students build and connect conceptual frameworks, develop practical investigative skills, and consider the ethical and global dimensions of modern biology. Both SL and HL students learn to interpret data, evaluate biological claims, and communicate scientific reasoning effectively.

Main Topics

- Molecular biology and biochemistry of life
- Cells, membranes, and cellular processes
- Genetics, inheritance, and evolution
- Organismal physiology and ecology

Learning Outcomes

- Integrate multiple lines of evidence to explain biological phenomena.
- Plan and conduct investigations using appropriate biological techniques.
- Analyze and evaluate data, including uncertainty and limitations.
- Discuss biological issues with attention to ethical, environmental, and societal perspectives.

IB Chemistry SL/HL Y1-Y2

Prerequisites: IM3/IM3+ (HL only)

Grade level: Grade 11–12 (two-year course)

Course Description

IB Chemistry develops a deep understanding of structure and reactivity as organizing ideas for the chemical world. Students explore models of matter, quantitative relationships, and energy changes through experiments, problem solving, and contextual examples. Across two years, SL and HL students strengthen their ability to connect symbolic, mathematical, and particulate representations while reflecting on chemistry's role in society and technology.

Main Topics

- Models of the particulate nature of matter
- Bonding, structure, and classification of matter
- Energetics, kinetics, and equilibrium
- Acids, bases, redox processes, and organic chemistry

Learning Outcomes

- Use structure and reactivity concepts to predict and explain chemical behavior.
- Apply stoichiometric and energetic calculations to design and analyze experiments.
- Evaluate chemical data, including sources of error and uncertainty.
- Consider how chemical knowledge informs local and global challenges.

IB Physics SL/HL Y1–Y2

Prerequisites: IM3/IM3+
Grade levels: Grade 11–12 (two-year course)
Course Description

IB Physics challenges students to describe, model, and predict physical phenomena using both qualitative and quantitative tools. Students investigate motion, forces, fields, waves, and modern physics topics through experiments, simulations, and multi-step problems. Over two years, SL and HL students develop strong mathematical modeling skills and an appreciation of how physics helps explain the natural and technological world.

Main Topics

- Space, time, and motion
- The particulate nature of matter
- Waves and wave behavior
- Fields, nuclear, and quantum physics

Learning Outcomes:

- Construct and use mathematical models to describe physical systems.
- Design and evaluate investigations that probe physical relationships.
- Interpret graphs and data to test predictions and refine models.
- Discuss the implications of physics ideas for technology and society.

IB Environmental Systems & Societies SL Y1/Y2

Grade levels: Grade 11–12 (two-year course)
Course Description

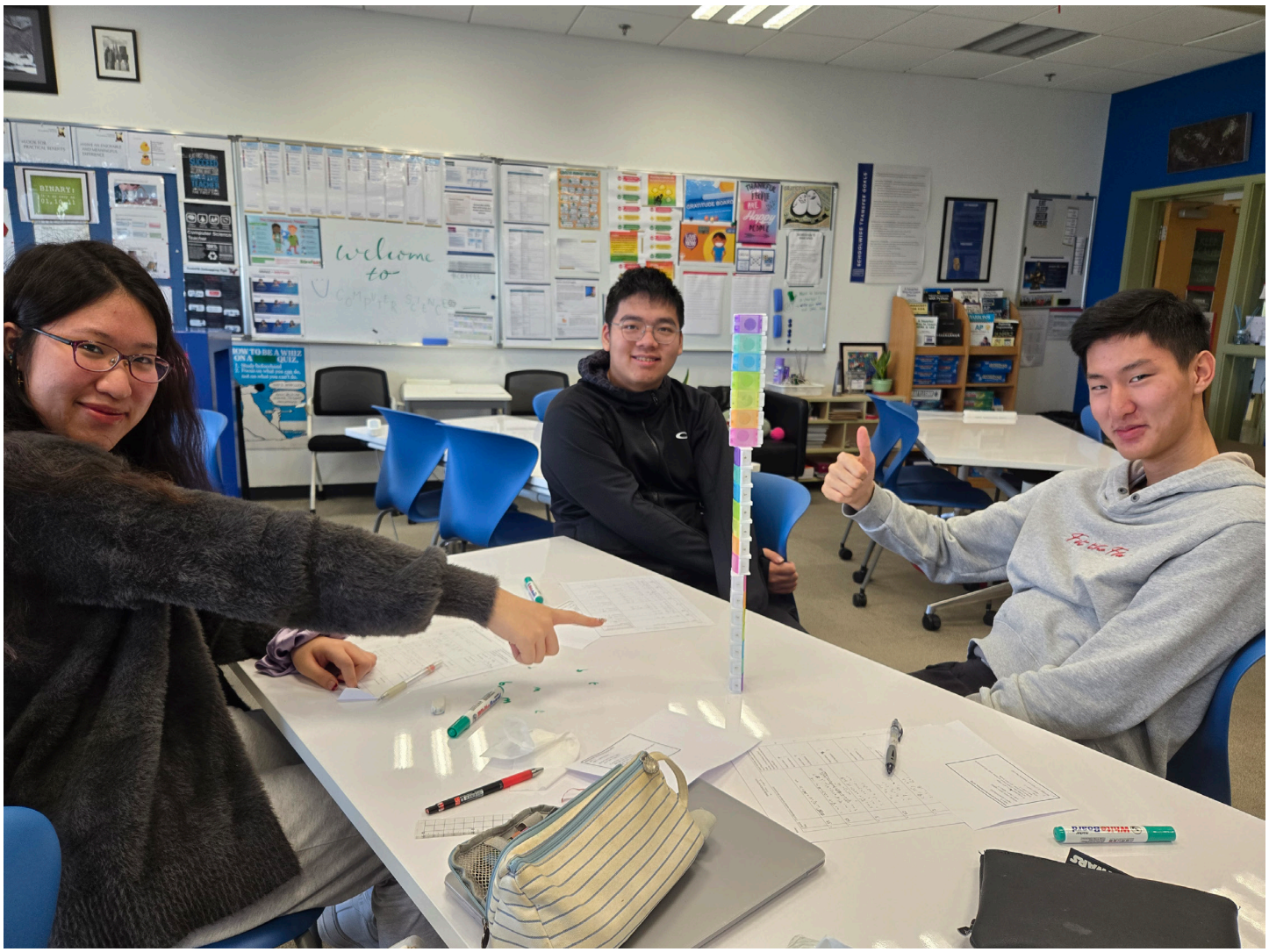
IB Environmental Systems and Societies is an interdisciplinary course that examines how natural systems function and how human societies interact with their environments. Students work with case studies, field experiences, and data sets to analyze environmental issues from scientific, social, and ethical perspectives. The course encourages students to consider multiple viewpoints and to propose informed, balanced responses to contemporary environmental challenges.

Main Topics

- Environmental value systems and worldviews
- Ecosystems, energy flow, and biodiversity
- Soil, food production, and resource use
- Climate change, pollution, and sustainability strategies

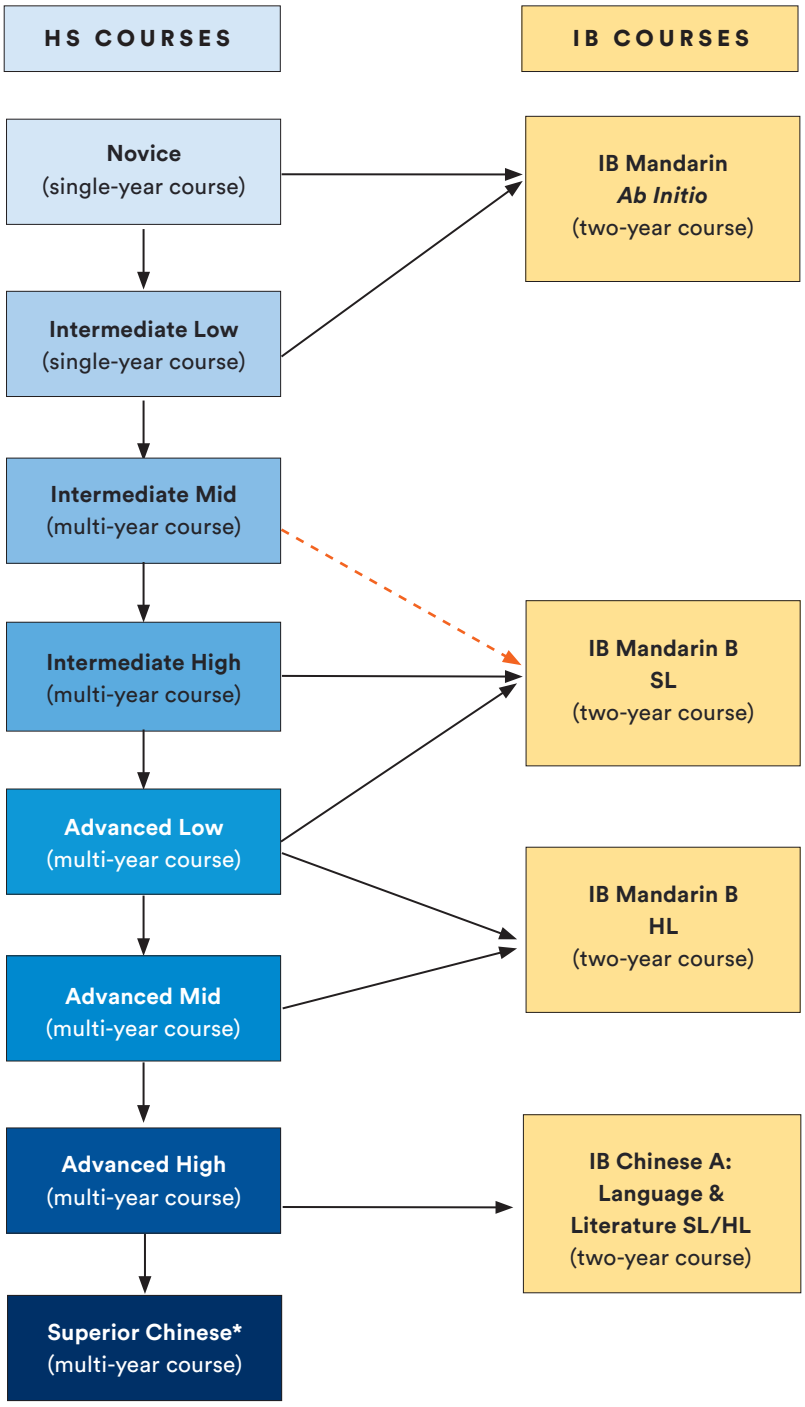
Learning Outcomes:

- Explain environmental issues using both scientific concepts and societal contexts.
- Interpret field and secondary data to identify environmental patterns and trends.
- Compare different perspectives on environmental problems and proposed solutions.
- Formulate and justify realistic actions that promote more sustainable systems.



CHINESE LANGUAGE COURSES

Chinese Department Flow Chart



Note: Full IB Diploma students will be recommended for placement into Mandarin B or Chinese A depending on their proficiency level. Students may then choose between taking their recommended course at the standard or higher level.

May require support and/or summer work

Legend

- IB course
- SAS course

The SAS Chinese Program

The goal of the Chinese program is to enable students to advocate for self, others and ideas in Chinese in a way that fosters collaboration, enhances global citizenship, challenges established thoughts, and leads to creative ideas. The SAS Chinese program marks progress toward achievement of this goal through ACTFL standards.

Oral Language

The ability to communicate in oral language is measured through assessments rooted in the Oral Proficiency Interview (OPI) by ACTFL. The OPI measures the language proficiency needed to ensure work readiness for differing types of employment. The OPI assessment measures from Novice (emerging levels of language for a young child or second language learner) to Superior (proficiency that provides a linguistic base for success in careers such as that of a judge, philosopher, or diplomat). The SAS measure of oral language proficiency ranges from Novice to Advanced High. Advanced High includes most aspects of the Superior range skills of the OPI.

Literacy

Reading comprehension for class placement is standardized by teachers to prepare the students' progress from Novice to Advanced High levels as well as for the IB Language A courses. Writing samples are analyzed by teachers. Writing levels range from entrance to the Novice course, in which students will begin to understand how characters are formed to the Advanced High course in which students narrate and persuade with organized, precise and artistically written language.

Placement

Students are placed in courses that best represent their skill set and next steps for learning in accordance with standards. The High School program at SAS offers seven levels of Chinese. The SAS course names reflect the ACTFL exit standard of the course.

- **Novice**
- **Intermediate Low**
- **Intermediate Mid**
- **Intermediate High**
- **Advanced Low**
- **Advanced Mid**
- **Advanced High**

Language Requirements:

Although SAS requires two global languages credits for graduation, most colleges and universities recommend four years of global languages.

Novice Chinese

Course Code: HS5024
Duration: Single-year Course
Prerequisites: None
Credits: 1.0

This one-year course is designed to give students a solid base in the foundational aspects of Chinese conversational language and literacy in a character-based language. Successful completion of this course means that students will be able to demonstrate mastery of the following skills:

Oral language: Speakers at the Novice level can answer a variety of familiar questions about topics related to daily life using practiced complete sentences most of the time. When prompted, he/she can ask a variety of familiar questions.

Reading: At the Novice level, students can use reading strategies such as reference to images, contextual clues, radicals and familiar characters to figure out the meaning of basic text.

Writing: Students can recognize radicals and use proper stroke order to write characters. Students can combine basic characters to form words. Students can independently write practiced patterns of sentences with familiar vocabulary.

Intermediate Low Chinese

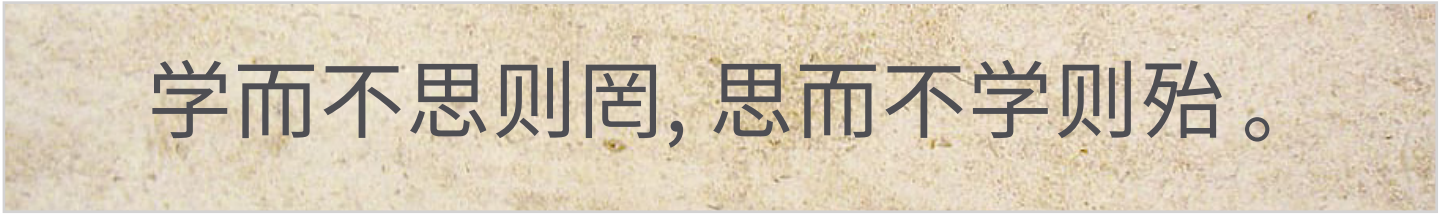
Course Code: HS5025
Duration: Single-year Course
Prerequisites: Successful demonstration of the skills of the Novice course
Credits: 1.0

This one-year course is designed to enable students to expand upon their already established foundation of the basic structures of spoken and written Chinese. Successful completion of this course means that students will be able to demonstrate mastery of the following skills:

Oral language: Speakers at the Intermediate Low level can answer a variety of familiar and some limited original questions about his/her daily life. He/ she is able to ask a variety of questions and talk about topics related to daily life in a series of sentences.

Reading: At the Intermediate Low level, students can use reading strategies such as reference to images, contextual clues, radicals and familiar characters to independently read text with varied sentence length.

Writing: Students can independently write sentences on familiar topics. The length of writing tasks has a word count of 100-150 characters.



Intermediate Mid Chinese

Course Code: HS5026
Duration: 1-2 year Course
Prerequisites: Successful demonstration of the skills of the Intermediate Low course
Credits: 1.0

This 1-2 year course is designed to enable students to independently converse in Chinese in order to solve basic problems, engage in extended, friendly conversations, and read and write original text within familiar contexts. Successful completion of this course means that students will be able to demonstrate mastery of the following skills:

Oral language: Speakers at the Intermediate Mid level can ask and answer a wide variety of original questions about his/her daily life. He/she is capable to speak in connected sentences that show originality of thought and the ability to solve authentic problems.

Reading: At the Intermediate Mid level, students can independently read short, non-complex texts that convey basic information and contain multiple sentences with the support of images and contextual clues.

Writing: Students can independently write with well-connected sentences on familiar topics that show variation of character usage. The length of writing tasks has a word count of 150-250 characters.

Intermediate High Chinese

Course Code: HS5027
Duration: 1-2 year Course
Prerequisites: Successful demonstration of the skills of the Intermediate Mid course
Credits: 1.0

This 1-2 year course is designed to enable students to independently converse in Chinese in order to solve problems with complications, engage in extended conversations on a variety of topics, and read and write original text that demonstrate access to an expand- ing cultural context and set of ideas. Successful completion of this course means that students will be able to demonstrate mastery of the following skills:

Oral language: Intermediate High speakers can maintain a conversation on a variety of topics of daily life and make connections to topics beyond self. He/ she is able to narrate and describe using connected discourse of paragraph length.

Reading: At the Intermediate High level, students can independently read short, non-complex texts that contain prolonged paragraphs with limited support of images and contextual clues.

Writing: Students can independently write in simple paragraphs on a variety of topics with supporting detail that shows variation of sentence structure, logical format, and emerging detail. The length of writing tasks has a word count of 250-350 characters.

Advanced Low Chinese

Course Code: HS5031
Duration: 1-2 year Course
Prerequisites: Successful demonstration of the skills of the Intermediate High course
Credits: 1.0

The Advanced Low Chinese course is designed to enable students to achieve conversational and literacy proficiency at an academic level over a duration of 1-2 years. Successful completion of this course signifies that students will have mastered the following skills:

Oral language: Students will demonstrate Advanced Low oral proficiency as outlined by Common Core standards. This includes the ability to engage effectively in various collaborative discussions—whether one-on-one, in groups, or in teacher-led settings—with diverse partners on Advanced Low topics, texts, and issues. Students will build on others' ideas while clearly expressing their own.

Reading: Students will be capable of reading and comprehending literary nonfiction and literature, including stories and poems, proficiently within the Common Core grade 6 and 7 text complexity band.

Writing: Students will be able to write routinely over extended time frames (allowing for research, reflection, and revision) as well as shorter time frames (within a single sitting or over one to two days) for a variety of discipline-specific tasks, purposes, and audiences at the Advanced Low level. Advanced Low students in Grade 10 may have access to IBDP Mandarin B Standard Level (SL) or Higher Level (HL).

Advanced Mid Chinese

Course Code: HS5032
Duration: 1-2 year Course
Prerequisites: Successful demonstration of the skills of the Advanced Low course
Credits: 1.0

The Advanced Mid Chinese course is designed to enable students to discuss and engage with a wide variety of academic and literary texts over a 1-2 year period. Successful completion of this course signifies that students will have mastered the following skills:

Oral language: Students will demonstrate Advanced Mid oral proficiency according to Common Core standards. This includes the ability to effectively engage in collaborative discussions—whether one-on-one, in groups, or in teacher-led settings—with diverse partners on Advanced Mid topics, texts, and issues. Students will build on others' ideas while clearly articulating their own.

Reading: Students will be capable of reading and comprehending literary nonfiction and literature, including stories and poems, proficiently within the Common Core grade 7 and 8 text complexity band.

Writing: Students will be capable of writing routinely over extended time frames (allowing for research, reflection, and revision) and shorter time frames (within a single sitting or over one to two days) for a variety of discipline-specific tasks, purposes, and audiences at the Advanced Mid level. Advanced Mid students in Grade 10 may have access to IBDP Mandarin B Higher Level (HL).

Advanced High Chinese

Course Code: HS3034
Duration: 1-2 year Course
Prerequisites: Successful demonstration of the skills of the Advanced Mid course
Credits: 1.0

The Advanced High Chinese course is designed to enable students to engage in literary analysis across a variety of genres over a duration of 1-2 years. Successful completion of this course signifies that students will have mastered the following skills:

Oral language: Students will demonstrate Advanced High oral proficiency according to Common Core standards. This includes the ability to initiate and participate effectively in a range of collaborative discussions—whether one-on-one, in groups, or in teacher-led settings—with diverse partners on Advanced High topics, texts, and issues. Students will build on others' ideas and express their own clearly and persuasively.

Reading: Students will be capable of reading and comprehending literary nonfiction and literature, including stories, drama, and poems, within the Common Core grade 8, 9, and 10 text complexity bands proficiently.

Writing: Students will be able to write routinely over extended time frames (allowing for research, reflection, and revision) and shorter time frames (within a single sitting or over one to two days) for a range of tasks, purposes, and audiences at the Advanced High level. Advanced High students in Grade 10 may have access to IBDP Chinese A Language and Literature.

Superior Chinese

Course Code: HS5147
Duration: 1-2 year Course
Prerequisites: Successful demonstration of the skills of the Advanced High course
Credits: 1.0

Superior Chinese and IB Chinese A Language and Literature share the same standards. The Superior Chinese course is designed to enable students to engage in literary analysis across a variety of genres over a duration of 1-2 years. Successful completion of this course signifies that students will have mastered the following skills:

Oral language: Students will demonstrate Superior oral proficiency according to Common Core standards. This includes the ability to initiate and participate effectively in a range of collaborative discussions—whether one-on-one, in groups, or in teacher-led settings—with diverse partners on Superior topics, texts, and issues. Students will build on others' ideas and express their own clearly and persuasively..

Reading: Students will be capable of reading and comprehending literary nonfiction and literature, including stories, drama, and poems, within the Common Core grade 11 and 12 text complexity bands proficiently.

Writing: Students will be able to write routinely over extended time frames (allowing for research, reflection, and revision) and shorter time frames (within a single sitting or over one to two days) for a range of tasks, purposes, and audiences at the Common Core grade 11 and 12 levels.

IB Mandarin *Ab Initio* SL Y1-Y2

Course Codes: HS5159 (Y1), HS5150 (Y2)
Duration: Two-year Course
Prerequisites: Students with no prior experience with Chinese, or else with skills within the range of the SAS Novice and Intermediate Low courses are recommended for IB AbInitio.
Credits: 2.0

This is a two-year course for students to achieve communicative competence in a variety of everyday situations. The objective of the course is clear and effective communication through the understanding and usage of a range of essential spoken and written forms of the language. The main focus of the course is on the acquisition of language for purposes and situations in everyday social interaction. While speaking and listening skills are emphasized, reading and writing skills are required as well. Aspects of the everyday life and culture of the Chinese speaking communities will be explored. The students are required to sit the both internal and external exam at the end of year 2.

IB Mandarin B SL/HL Y1-Y2

Course Codes: HS5113 (SL Y1), HS5123 (SL Y2), HS5133 (HL Y1), HS5143 (HL Y2)
Duration: Two-year Course
Prerequisites: Students with skills within the range of the SAS Intermediate High and Advanced Low courses are recommended for IB Language B SL. Students with skills within the range of the SAS Advanced Low and Advanced Mid courses are recommended for IB Mandarin B HL.
Credits: 2.0

IB Mandarin B SL/HL course is a language acquisition course designed for students with some previous experience of the target language. In the language B course, students further develop their ability to communicate in Mandarin through the study of language, themes and texts. In doing so, they also develop conceptual understandings of how language works and international-mindedness through the study of the Mandarin language and Chinese cultures. The emphasis of the course will be on the development of the four primary language skills of listening, speaking, reading, and writing through a variety of texts, topics, and materials.

In this course, students learn to communicate in Mandarin in familiar and unfamiliar contexts. They describe situations, narrate events, explain problems and support their personal opinions for a variety of purposes and on a variety of topics related to the five prescribed themes: Identities, Experience, Human ingenuity, Social organization and Sharing the planet. IB students are required to sit the external exam at the end of year 2.

Higher Level Coursework: The study of two literary works originally written in Mandarin. The distinction between language B SL and HL can also be seen in the level of competency the student is expected to develop in the receptive, productive and interactive skills.

IB Chinese A: Language & Literature SL/HL Y1-Y2

Course Codes: HS5114 (SL Y1), HS5124 (SL Y2); HS5134 (HL Y1); HS5144 (HL Y2)
Duration: Two-year Course
Prerequisites: Students with skills within the range of the SAS Advanced High course are recommended for IB Chinese A: Language & Literature
Credits: 2.0

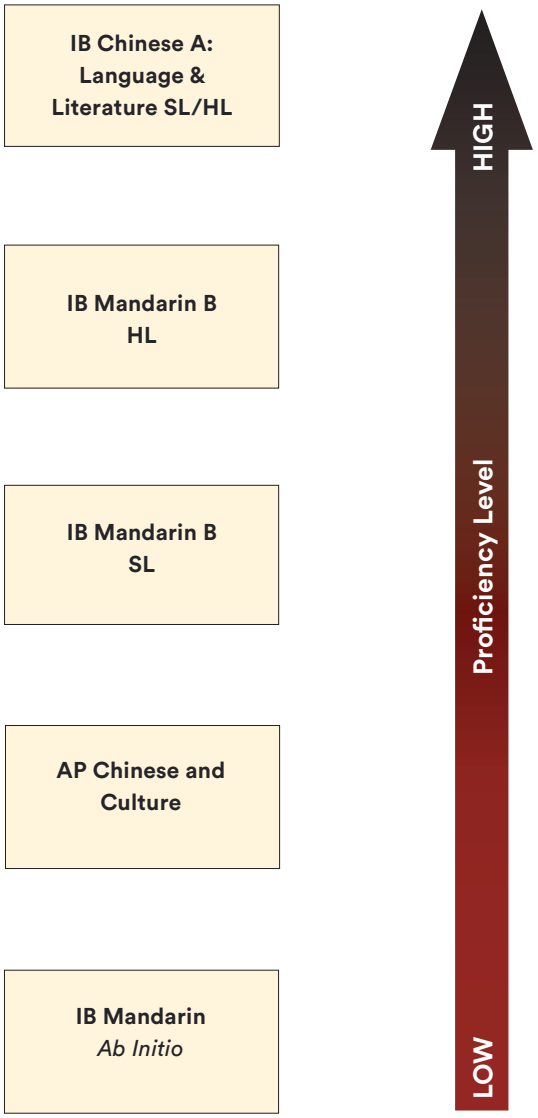
IB Chinese A: Language and Literature SL/HL is a two-year course that examines both traditional and nontraditional texts. The course will include, but is not limited to:

- A study of rhetoric and the impact of language use beyond that of literary analysis.
- An exploration of the connections between language and power, language and culture, and language and mass communication.
- Recognition of the importance of a writer's world and audience.
- Recognition of the impact of a reader's context on (multiple) readings of a text.
- Preparation for university-level writing for a variety of majors.

Since this course will study literary and non-literary texts, it best suits students who love literature and are interested in thinking about language in new ways.

Higher Level Coursework: Two of the IBO assessment tasks for HL are more demanding than those of SL. In addition to studying additional topics and reading additional texts, HL students are required to submit one additional written task for the external IBO assessment. The external assessment criteria require that HL students show a deeper understanding of content and demonstrate the ability to write a comparative analysis of texts.

Chinese Language Proficiency Level for External Assessments



There is no formal Advanced Placement (AP) course being offered in the SAS Chinese program. We have limited capacity for the exam through Student Independent Study. Students who have attained Intermediate Mid to Intermediate High level are the priority candidates to take the exams, as some AP material and similar themes are covered in that class.

Students in Advanced Low Chinese may also take the AP Chinese exam if there is room and upon recommendation from their Chinese teacher.

The AP Chinese exam is not appropriate for students whose Chinese level is already higher than that of the exam (Advanced Mid or above).

GLOBAL LANGUAGES COURSES

Global Languages Department Flow Chart

Students may choose from these courses based on previous course success and results from a language placement exam:

French Novice	Spanish Novice
French Intermediate Mid	Spanish Intermediate Mid
French Intermediate High	Spanish Intermediate High
French Advanced Low	Spanish Advanced Low
French Advanced Mid	Spanish Advanced Mid

Grade 11 and 12 students may choose from these courses based on previous course success and results from a language placement exam:

French Novice	IBDP French Ab Initio Y1	Spanish Novice	IBDP Spanish Ab Initio Y1
French Intermediate Mid	IBDP French Ab Initio Y2	Spanish Intermediate Mid	IBDP Spanish Ab Initio Y2
French Intermediate High		Spanish Intermediate High	
French Advanced Low	IBDP French B SL/HL Y1	Spanish Advanced Low	IBDP Spanish B SL/HL Y1
French Advanced Mid	IBDP French B SL/HL Y2	Spanish Advanced Mid	IBDP Spanish B SL/HL Y2

Legend

SAS course

IB course

IBDP courses are two year courses

INTRODUCTION

The Global Language curriculum is designed to provide the students with an international perspective where the instruction is focused on directing communication (interpersonal, interpretive, and presentational), always within a cultural awareness context.
At the same time, students will be able to use the target language to reinforce, and further their knowledge of other disciplines.

Three important goals of the Global Language Department are for students to:

- Use the target language for personal enrichment and enjoyment and to expand knowledge through independent work
- Apply their knowledge of the language to real life contexts and authentic situations
- In a global society, competency in multiple languages increases your marketability

In order to reach these goals, the instructional language will be mostly in the target language.

The curriculum in high school is aligned with the correlated middle school program, as well as the parameters of the International Baccalaureate Program and ACTFL standards, which define what students can do in a foreign language.

Students must meet course prerequisites to enroll in the Global Language program, including the following parameters:

- For new students, a placement test will be given prior the beginning of the school year
- Students who have completed Intermediate Low French or Spanish in SAS middle school, or upon teacher recommendation, may go directly to Intermediate Mid French or Spanish in grade Nine

The Global Language Department offers a variety of educational itineraries, as seen in the flowchart on page 33, including IB courses, such as Language B and Language ab initio. Language A1 self-study is also an option. Although SAS requires two global languages credits for graduation, most colleges and universities recommend four years of global languages.

Language Requirements:

Although SAS requires two global languages credits for graduation, most colleges and universities recommend four years of global languages.

Je pense, donc je suis.

Decartes

French Novice

Prerequisites: None – designed for students beginning French
Grade levels: Grade 9–12
Course Description

HS Novice is a one-year beginner-level language course that introduces students to communication in French. Through thematic exploration and hands-on tasks and activities, students develop foundational listening, speaking, reading, and writing skills as they progress toward the Intermediate level.

Main Topics

- Personal and family identity
- School and daily life
- Health, well-being, and professions
- Travel and leisure

Learning Outcomes

- Express ideas and information in spoken and written French
- Comprehend authentic materials on familiar topics
- Participate in simple conversations and interactive communication
- Develop independent language-learning strategies
- Demonstrate intercultural understanding through language use
- Recognize cultural diversity in francophone communities

French Intermediate Mid

Prerequisites: French Novice or placement examination
Grade levels: Grade 9–12
Course Description

This course advances the interpretive, interpersonal, and presentational skills students as they continue to build strong foundations in French. Students deepen their proficiency in French through interactive lessons, meaningful cultural exploration, and authentic communication tasks that prepare them for real-world interactions. By the end of the course, students will communicate more confidently in various contexts, express and support opinions with greater detail, engage in extended conversations on familiar and some unfamiliar topics, and comprehend a wider range of French-language texts and media with increased accuracy.

Main Topics

- Language & Identity
- Food & Eating Habits
- Environmental Awareness & Sustainability
- Technology

Learning Outcomes

- Keep a conversation going by asking simple follow-up questions and reacting to others.
- Share information and opinions clearly enough to be understood by French speakers used to non-native learners.
- Use a wider range of vocabulary and grammar to communicate more precisely.
- Develop autonomous language learning skills
- Demonstrate intercultural understanding through language use

French Intermediate High

Prerequisites: French Intermediate Mid or placement examination
Grade levels: Grade 9–12
Course Description

French Intermediate High develops students' proficiency across all four language skills through authentic communication and cultural exploration. Students will engage in conversations on familiar and researched topics, interpret short texts and audio materials, and present information with increasing complexity and accuracy.

Main Topics

- Personal Identity and Global Citizenship
- Relationships and Social Interactions
- Leisure and Hobbies
- Traditions, Food, and Celebrations
- Travel and Cultural Exploration

Learning Outcomes

- Participate in conversations on familiar topics and handle social interactions using connected sentences and some paragraph-length discourse
- Understand main ideas and some supporting details in authentic spoken French on familiar topics
- Understand main ideas and key supporting details in authentic texts on familiar topics
- Write cohesive paragraphs on familiar topics with control of present, past, and future time frames.

French Advanced Low

Prerequisites: French Intermediate High or placement examination
Grade levels: Grade 9–12
Course Description

French Advanced Low helps students communicate confidently on a wide range of topics through authentic materials like films, articles, and podcasts from francophone cultures. Students will engage in meaningful conversations, tell detailed stories across time frames, and explore complex themes including cultural identity, social issues, innovation, and global challenges.

Main Topics

- Languages and Cultural Differences, well-being and Health
- Life Stories and Leisure Activities
- Education and Social Relationships
- Scientific Innovation and Entertainment
- Environment and Globalization, peace and Conflicts

Learning Outcomes

- Participate in conversations on familiar and some unfamiliar concrete topics with sustained discourse
- Understand main ideas and most supporting details in connected discourse on familiar topics
- Understand main ideas and supporting details in authentic texts on familiar and some unfamiliar topics
- Write about familiar and some unfamiliar topics with good control of present, past, and future time frames
- Analyze and compare cultural practices and perspectives across francophone cultures
- Present detailed research and well-supported arguments on complex topics.

IB French Ab Initio Y1 and Y2

Prerequisites: None (designed for students beginning French for the first time)
Grade levels: Grade 11–12
Course Description

IB French Ab Initio is a two-year beginner-level language course that introduces students to French communication and francophone cultures. Through thematic exploration of real-world topics, students build essential listening, speaking, reading, and writing skills.

Main Topics

- Personal and cultural identity
- Daily life, routines, and relationships
- Travel, experiences, and storytelling
- Technology, media, and innovation
- Education, work, and community life
- Environmental awareness and global citizenship

Learning Outcomes

- Express ideas and information in spoken and written French
- Comprehend authentic French materials on familiar topics
- Participate in conversations and interactive communication
- Produce coherent texts appropriate to purpose and audience
- Recognize and appreciate cultural diversity in francophone communities
- Develop autonomous language learning skills
- Demonstrate intercultural understanding through language use

IB French B SL Y1 and Y2

Prerequisites: French Intermediate High or placement examination
Grade levels: Grade 11–12
Course Description

IB French B develops students' communication skills in French through exploration of authentic materials and real-world contexts while fostering curiosity about francophone cultures and open-mindedness toward diverse perspectives. The course prepares students for both internal school assessments and external IB examinations at the end of year 2.

Main Topics

- **Identities**–Health and Well-being, Language and Identity
- **Experiences**–Holidays and travels, customs and traditions
- **Human Ingenuity**–Communication and Media, Technology
- **Social Organization**–Community, Education
- **Sharing the Planet**–The environment, Peace and conflicts

Learning Outcomes

- Develop oral and written expression in transactional and social contexts
- Respond effectively to language demands in real-world situations
- Comprehend and analyze authentic French texts, audio, and visual materials
- Produce coherent written and spoken communication across various text types
- Demonstrate intercultural understanding and insights into francophone perspectives
- Apply receptive, productive, and interactive language skills in diverse contexts
- Engage critically with global issues through the target language

IB French B HL Y1 - Y2

Prerequisites: French Intermediate High or placement examination
Grade levels: Grade 11–12
Credits: 1.0 per year (2-year program)
Course Description

IB French B HL develops students' communication skills in French through exploration of authentic materials and real-world contexts while fostering curiosity about francophone cultures and open-mindedness toward diverse perspectives. At the HL level, the study of two literary works originally written in French is a requirement. HL students are expected to understand fundamental literary elements, such as characters, themes, and plot.

The course prepares students for both internal school assessments and external IB examinations at the end of year 2.

Main Topics

- **Identities**–Health and Well-being, Language and Identity
- **Experiences**–Holidays and travels, customs and traditions
- **Human Ingenuity**–Communication and Media, Technology
- **Social Organization**–Community, Education
- **Sharing the Planet**–The environment, Peace and conflicts

Learning Outcomes

- Develop oral and written expression in transactional and social contexts
- Respond effectively to language demands in real-world situations
- Comprehend and analyze authentic French texts, audio, and visual materials
- Produce coherent written and spoken communication across various text types
- Demonstrate intercultural understanding and insights into francophone perspectives
- Apply receptive, productive, and interactive language skills in diverse contexts
- Engage critically with global issues through the target language

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Spanish Novice

Prerequisites: None (designed for students beginning Spanish)
Grade levels: Grade 9–12
Course Description

HS Novice is a one-year beginner-level language course that introduces students to communication in Spanish. Through thematic exploration and hands-on tasks and activities, students develop foundational listening, speaking, reading, and writing skills as they progress toward the Intermediate level.

Main Topics

- Personal and family identity
- School and daily life
- Health, well-being, and professions
- Travel and leisure

Learning Outcomes

- Express ideas and information in spoken and written Spanish
- Comprehend authentic materials on familiar topics
- Participate in simple conversations and interactive communication
- Develop independent language-learning strategies
- Demonstrate intercultural understanding through language use
- Recognize cultural diversity in Spanish-speaking communities

Spanish Intermediate Mid

Prerequisites: Spanish novice or placement examination
Grade levels: Grade 9–12
Course Description

This course advances the interpretive, interpersonal, and presentational skills students developed at the Intermediate-Low level. Students will deepen their proficiency in Spanish through interactive lessons, immersive cultural experiences, and authentic communication tasks that prepare them for real-world interactions. By the end of the course, students will communicate more effectively in various contexts, express and support opinions with greater detail, engage in extended conversations on familiar and some unfamiliar topics, and comprehend diverse Spanish-language texts and media with increased accuracy.

Main Topics

- Language & Identity
- Food & Eating habits
- Environmental awareness and sustainability
- Technology

Learning Outcomes

- Participate in conversations on familiar topics and handle social interactions using connected sentences and some paragraph-length discourse
- Understand main ideas and some supporting details in authentic spoken on familiar topics
- Understand main ideas and key supporting details in authentic texts on familiar topics
- Write cohesive paragraphs on familiar topics with control of present, past, and future time frames

Spanish Intermediate High

Prerequisites: Spanish Intermediate-Mid or placement examination
Grade levels: Grade 9–12
Course Description

Spanish Intermediate High is designed to strengthen students' language proficiency across interpretive, interpersonal, and presentational communication. Students will expand their ability to understand spoken and written Spanish, engage in conversations on familiar and researched topics, and present ideas clearly and effectively.

Main Topics

- Language & Identity
- Traditions & Celebrations
- Leisure activities & hobbies
- Technology

Learning Outcomes

- Analize the relationship between language and cultural identity
- Discuss personal preferences and engage others in meaningful conversations.
- Compare cultural practices across contexts, identifying values and beliefs.
- Recognize cultural diversity in Spanish-speaking communities
- Explain how tools and resources are used in daily life.
- Analize how people communicate and connect across different cultural contexts.

Spanish Advanced Low

Prerequisites: A minimum of three years of prior formal instruction in Spanish, or equivalent experience
Grade levels: Grade 9–12
Course Description

Spanish Advanced Low is a language acquisition course aimed at students who already have experience learning Spanish. During this course, students develop their ability to understand and produce written and spoken texts for a variety of purposes, while strengthening intercultural awareness. The course builds confidence in real-world communication.

Main Topics

- Five major themes: identities, experiences, human ingenuity, social organization, sharing the planet
- Functional communication: narrating, describing, comparing, explaining, and expressing opinions
- Core and intermediate grammar in meaningful contexts
- Text types across personal, professional, and mass media communication
- Listening and reading comprehension strategies
- Structured and spontaneous oral communication
- Cultural perspectives across the Spanish-speaking world
- Conceptual understandings of audience, context, purpose, meaning, and variation

Learning Outcomes

- Understand and analyze written, audio, and visual texts on a range of familiar and unfamiliar topics.
- Produce coherent written texts (250–400 words) using appropriate vocabulary, structures, and register.
- Express and justify personal opinions on a variety of themes.
- Communicate with clarity and growing fluency in structured and spontaneous oral interactions.
- Apply conventions of different text types effectively.
- Demonstrate intercultural awareness through meaningful cultural comparisons.
- Use language strategies such as inference, paraphrasing, and circumlocution to negotiate meaning.
- Organize ideas logically and clearly for different audiences and contexts.

Spanish Advanced Mid

Prerequisites: A minimum of four years of prior formal instruction in Spanish, or equivalent experience.
Grade levels: Grade 9–12
Course Description

Spanish Advanced Mid enhances and goes dipper in the instructional outcomes of the Advanced Low course. During this course, students develop their ability to understand and produce written and spoken texts for a variety of purposes, while strengthening intercultural awareness. The course builds confidence in real-world communication.

Main Topics

- Five major themes: identities, experiences, human ingenuity, social organization, sharing the planet
- Functional communication: narrating, describing, comparing, explaining, and expressing opinions
- Core and intermediate grammar in meaningful contexts
- Text types across personal, professional, and mass media communication
- Listening and reading comprehension strategies
- Structured and spontaneous oral communication
- Cultural perspectives across the Spanish-speaking world
- Conceptual understandings of audience, context, purpose, meaning, and variation

Learning Outcomes

- Understand and analyze written, audio, and visual texts on a range of familiar and unfamiliar topics.
- Produce coherent written texts (250–400 words) using appropriate vocabulary, structures, and register.
- Express and justify personal opinions on a variety of themes.
- Communicate with clarity and growing fluency in structured and spontaneous oral interactions.
- Apply conventions of different text types effectively.
- Demonstrate intercultural awareness through meaningful cultural comparisons.
- Use language strategies such as inference, paraphrasing, and circumlocution to negotiate meaning.
- Organize ideas logically and clearly for different audiences and contexts.

IB Spanish Ab Initio Y1 - Y2

Prerequisites: None (designed for students beginning Spanish for the first time)
Grade levels: Grade 11–12
Course Description

IB Spanish Ab Initio is a two-year beginner-level language course that introduces students to Spanish communication and hispanic cultures. Through thematic exploration of real-world topics, students build essential listening, speaking, reading, and writing skills.

Main Topics

- Personal and cultural identity
- Daily life, routines, and relationships
- Travel, experiences, and storytelling
- Technology, media, and innovation
- Education, work, and community life
- Environmental awareness and global citizenship

Learning Outcomes

- Express ideas and information in spoken and written Spanish
- Comprehend authentic Spanish materials on familiar topics
- Participate in conversations and interactive communication
- Produce coherent texts appropriate to purpose and audience
- Recognize and appreciate cultural diversity in Hispanic communities
- Develop autonomous language learning skills
- Demonstrate intercultural understanding through language use

IB Spanish B SL Y1-Y2

Prerequisites: A minimum of three years of prior formal instruction in Spanish, or equivalent experience.
Grade levels: Grade 11–12
Course Description

Spanish B SL is a language acquisition course aimed at students who already have experience learning Spanish. Over two years, students develop their ability to understand and produce written and spoken texts for a variety of purposes, while strengthening intercultural awareness. The course builds confidence in real-world communication and prepares students for all components of the IB SL assessment.

Main Topics

- The five IB themes: identities, experiences, human ingenuity, social organization, sharing the planet

- Functional communication: narrating, describing, comparing, explaining, and expressing opinions
- Core and intermediate grammar in meaningful contexts
- Text types across personal, professional, and mass media communication
- Listening and reading comprehension strategies
- Structured and spontaneous oral communication
- Cultural perspectives across the Spanish-speaking world
- Conceptual understandings of audience, context, purpose, meaning, and variation

Learning Outcomes
- Understand and analyze written, audio, and visual texts on a range of familiar and unfamiliar topics.
- Produce coherent written texts (250–400 words) using appropriate vocabulary, structures, and register.
- Express and justify personal opinions on a variety of themes.
- Communicate with clarity and growing fluency in structured and spontaneous oral interactions.
- Apply conventions of different text types effectively.
- Demonstrate intercultural awareness through meaningful cultural comparisons.
- Use language strategies such as inference, paraphrasing, and circumlocution to negotiate meaning.
- Organize ideas logically and clearly for different audiences and contexts.

IB Spanish B HL Y1-Y2

Prerequisites: A minimum of three to four years of prior formal instruction in Spanish.
Grade levels: Grade 11–12
Course Description

Spanish B HL is an advanced language acquisition course that challenges students to use Spanish with sophistication, depth, and precision. Over two years, students explore complex authentic texts, develop higher-order analytical skills, and study two literary works in the target language. The course prepares students for the demands of the IB HL assessments through rigorous development of receptive, productive, and interactive communication.

Main Topics
- In-depth exploration of the five IB themes
- Study and analysis of two literary works in Spanish
- Extended written production (450–600 words) across diverse text types
- Complex grammar and stylistic development
- Interpretation and evaluation of authentic written, audio, and audiovisual materials
- Advanced oral communication, including the HL literary-based Individual Oral
- Argumentation, persuasion, and critical evaluation
- Cultural perspectives and global issues across the Spanish-speaking world.

Learning Outcomes
- Analyze and evaluate complex written, audio, and visual texts.
- Produce sophisticated, well-structured written texts with appropriate register and style.
- Express ideas with nuance, precision, and sustained accuracy across a variety of contexts.
- Engage confidently in extended, spontaneous oral discussions.
- Interpret literary extracts and connect them to broader cultural and thematic ideas.
- Use a wide range of grammatical structures and idiomatic language effectively.
- Present and support arguments with relevant examples and cultural insights.
- Demonstrate full preparedness for HL internal and external assessments.

IB Self-Taught Language A1 SL Y1-Y2

Prerequisites: Students must be fluent readers and writers in their mother tongue and able to analyze literary texts independently. Strong personal organization is required, as part of the course is completed through guided independent study.
Course Description

Language A: Literature (Self-Taught) is a two-year course for students who study literature in their native language with school support and guidance from an external language tutor. Students explore literary works from different periods, forms, and cultures, developing strong analytical, interpretative, and critical-thinking skills. The course follows the same aims, objectives, and assessment model as all IB Language A: Literature courses.

Main Topics
- Study of nine literary works in the student's mother tongue (SL requirement)
- Exploration of four literary forms: poetry, drama, novel, and short story
- Guided independent reading with support from an external tutor
- Literary analysis through the IB's three central concepts: identity, culture, and creativity
- Examination of how texts develop perspectives, representation, and transformation
- Comparative analysis across authors, periods, and cultures
- Preparation for IB assessments: IO, Paper 1 (Guided Literary Analysis) and Paper 2 (Comparative Essay)
- Development of academic writing, essay structure, and textual commentary skills

Learning Outcomes
- Read, analyze, and interpret literary texts with depth and independence.
- Explain how writers use structure, style, and literary techniques to create meaning.
- Compare and contrast texts across contexts, cultures, and genres.
- Produce coherent analytical and comparative essays using appropriate literary terminology.
- Discuss texts orally with clarity, insight, and personal engagement.
- Connect literary works to the IB concepts of identity, culture, and creativity and the relationships between readers, writers, and texts.
- Demonstrate understanding of global literary perspectives and cultural diversity.
- Show full preparedness for internal and external IB assessments.

Dime con quién andas y te diré quién eres.

VISUAL ARTS COURSES

Visual Arts Department Flow Chart

Grade 9 students may choose any of the courses below based on meeting prerequisites:

- Photography
- Art Foundations
- Graphic Design
- Digital Film Making

Grade 10 students may choose any of the courses below based on meeting prerequisites:

- Photography
- Art Foundations
- Graphic Design
- Digital Film Making
- Advanced Photography
- Studio Art
- Advanced Graphic Design 1
- Advanced Digital FIlm Making 1

Grade 11 and 12 students may choose any of the courses below based on meeting prerequisites:

- Photography
- Art Foundations
- Graphic Design
- Digital Film Making
- Advanced Photography 1, 2 & 3
- Studio Art
- Advanced Graphic Design 1
- Advanced Digital Film Making 1
- Advanced Studio Art 1 & 2
- Advanced Graphic Design 2 & 3
- Advanced Digital Film Making 2 & 3
- IB Visual Art SL/HL (two-year course)
- IB Film SL/HL (two year course)
- AP 2D Design

Legend

- AP course
- IB course
- SAS course

VISUAL ARTS INTRODUCTION

At SAS the Visual Arts encompasses four distinct areas of creativity, fine arts, graphic design, photography and film making. The courses are designed for students to develop art-making, design, film and photo skills and expand their knowledge of visual media. Students can explore a wide variety of techniques and processes across 2D and 3D media. In class various styles and approaches to art, design, photography and film making are explored. The students create and reflect on their own work and that of others. Visual Arts courses develop in students the lifelong skills of problem solving, creative thinking, and self-expression.

Graphic Design

Prerequisites: None
Grade levels: Grade 9–12
Course Description

In this class, students explore visual communication as it applies to the commercial art of graphic design. They learn about the principles of design, how these can be manipulated to improve design work, and how designs differ depending on their intended target audience. This course leans heavily toward working digitally, with some sketchbook work in traditional media.

Main Topics

- Design processes (research, thumbnailing, mock-ups, completion)
- Principles of design
- Digital portraiture
- Working in a team to create cafe graphics
- Zoo signage
- Business cards and logos
- Typography
- Designing for a location
- Personal projects
- Raster and vector graphics
- Target audience considerations
- Career paths in graphic design

Learning Outcomes

- Apply principles of design to improve design work
- Work effectively in both raster and vector graphics
- Design for specific target audiences
- Follow complete design processes from research to realization
- Create various commercial design projects
- Understand career opportunities in graphic design
- Work primarily in digital media with some traditional sketchbook work

Advanced Graphic Design 1, 2 & 3

Prerequisites: Graphic Design
Grade levels: Grade 10–12
Course Description

These courses continue building on skills from Graphic Design course. Students explore specific disciplines of the field in even greater depth and detail through projects of increasing complexity and sophistication. These courses lean heavily toward working digitally, with some sketchbook work in traditional media.

Main Topics

- Creating graphic identities
- Identifying a target audience and designing for them
- Creating and presenting a design pitch for a client
- Developing designs for specific locations
- Illustrating, working with symbols and text
- Packaging
- Understanding and working in different Graphic Design styles and traditions
- Creating multiple sophisticated design solutions

Learning Outcomes

- Articulate sophisticated design rationales
- Identify and designing for target audiences with sophistication
- Conduct research to inform complex design decisions
- Present multiple refined design solutions
- Demonstrate advanced proficiency in raster and vector design
- Complete sophisticated design projects through all professional stages

Photography

Prerequisites: None
Grade levels: Grade 9–12
Course Description

Students learn multiple techniques with digital and 35mm film cameras, darkroom techniques, and digital editing skills using the photos as the base image. Studio work includes consideration of both aesthetic and conceptual components, with the camera, darkroom, and software as tools to encourage creative and critical thinking skills.

Main Topics

- Digital camera techniques
- 35mm film camera operation
- Darkroom processing and printing
- Digital photo editing
- Functional photography projects
- Conceptual photography projects
- Creative problem-solving through photography
- Introduction to high level photographers and their works of art

Learning Outcomes

- Demonstrate proficiency with digital and film cameras
- Apply darkroom techniques to develop and print photographs
- Edit digital images using professional software
- Create a body of photographic works
- Apply creative and critical thinking skills to photography projects
- Use photography as a tool for visual expression

Advanced Photography 1, 2, & 3

Prerequisites: Photography
Grade levels: Grade 10–12
Course Description

Advanced Photography courses are offered for those who have a serious interest in photography following their experience in Photography 1. These courses require students to demonstrate a high level of motivation, independent thinking, creative design, and problem-solving skills. Students will develop both digital and darkroom print portfolios.

Main Topics

- Advanced digital photography techniques
- Advanced darkroom processes
- Portfolio development (digital and darkroom)
- Independent creative projects
- Advanced composition and design
- Personal artistic vision development

Learning Outcomes

- Demonstrate proficiency with digital and film cameras
- Create sophisticated digital and darkroom print portfolios
- Demonstrate advanced technical proficiency in photography
- Apply independent thinking to photographic projects
- Solve complex creative and technical problems
- Develop a personal photographic style
- Work self-directedly on long-term projects

Studio Art

Prerequisites: One full year of Art Foundations or Graphic Design
Grade levels: Grade 10–12
Course Description

Studio Art offers an in-depth exploration of techniques and media with an emphasis on skill development to expand students' visual arts foundation. Both 2D and 3D techniques, including drawing, painting, ceramics, and sculpture, are used to challenge students to become more thoughtful and skilled artists.

Main Topics

- Advanced drawing techniques
- Painting methods and exploration
- Ceramics and clay work
- Sculpture and 3D construction
- Visual journaling and idea development
- Art historical and contemporary context
- Personal reflection and artistic growth

Learning Outcomes

- Demonstrate advanced proficiency in 2D and 3D techniques
- Use visual journals to explore and develop ideas
- Research and understand art in historical and contemporary contexts
- Reflect critically on personal artistic development
- Create thoughtful and technically skilled artworks
- Expand visual arts foundation through in-depth practice

Advanced Studio Art 1 and 2

Prerequisites: Two years of visual art, including Studio Art
Grade levels: Grade 11–12
Course Description

Advanced Studio Art 1&2 are upper-level fine art courses emphasizing self-direction in choice of subject matter and medium. Students create imaginative and expressive artworks of high technical and aesthetic standards. Advanced Studio Art 2 allows students to continue building on their portfolio of work from Advanced Studio Art 1.

Main Topics

- Self-directed subject matter exploration
- Advanced techniques across multiple media
- Visual journal research and development
- Historical and contemporary art context
- Personal artistic voice development
- High-level technical and aesthetic standards
- Portfolio development and refinement
- Exhibition preparation and curation

Learning Outcomes

- Create imaginative and expressive artworks independently
- Demonstrate high technical and aesthetic standards
- Use visual journals for thorough idea exploration and research
- Understand and apply art historical and contemporary contexts
- Reflect critically on personal artistic practice
- Make self-directed choices about subject matter and medium
- Build a cohesive portfolio of advanced artwork for exhibition
- Articulate artistic vision and process

AP 2D Design

Prerequisites: Two years of visual art
Grade levels: Grade 11–12
Course Description

Students create and submit an AP Portfolio to the College Board at the end of April in place of a written exam. The portfolio addresses two-dimensional design and requires students to demonstrate mastery of 2D design skills using a variety of media. One important component is a summer assignment to be completed prior to beginning the course.

Main Topics

- Elements and principles of 2D design
- Purposeful decision-making in art
- Representational and abstract approaches
- Developing a Sustained Investigation
- Portfolio development for College Board submission
- Sketchbook exploration and reflection
- Multiple media and techniques in 2D art

Learning Outcomes

- Demonstrate mastery of 2D design skills
- Apply elements and principles of art in an integrative way
- Make purposeful decisions about image organization
- Create effective designs using representational or abstract approaches
- Complete a comprehensive AP portfolio for submission
- Use sketchbooks to explore visual ideas and reflect on projects

Art Foundations

Prerequisites: None
Grade levels: Grade 9–12
Course Description

Art Foundations provides students with opportunities to build skills across a wide range of media including drawing, painting, printing, and sculpture. It is project-based and includes teacher-led projects and opportunities to pursue personal passion projects.

Main Topics

- Drawing techniques and media
- Painting methods and materials
- Printmaking processes

- Sculpture and 3D art
- Teacher-led skill-building projects
- Personal passion projects
- Introduction to visual arts concepts

Learning Outcomes
- Demonstrate foundational skills in drawing, painting, printing, and sculpture
- Work effectively across multiple artistic media
- Complete structured projects with technical proficiency
- Develop and execute personal artistic projects
- Apply basic principles of art and design
- Build confidence in artistic expression

Digital Film Making

Prerequisites: None
Grade levels: Grade 9–12
Course Description

The Digital Film Making course focuses on practical group filmmaking. Students develop technical skills and understanding of film language through hands-on video making with a range of equipment. This course enhances creativity, deepens understanding of cinematic language, and develops original short films through effective collaboration.

Main Topics
- Film language and cinematic techniques
- Genre conventions
- Chinese cinema
- Hands-on video production
- Film analysis and scene study
- Collaborative filmmaking
- Conceptual thinking and storytelling
- Editing
- Cinematography
- Submit film to Shanghai Student Film Festival

Learning Outcomes
- Demonstrate technical proficiency with video equipment
- Apply understanding of film language to create short films
- Analyze film scenes through essay, slide presentation, or video commentary
- Collaborate effectively in group film projects
- Create original short films

IB Film SL/HL

Prerequisites: None
Grade levels: Grade 11
Course Description

The IB Film HL course provides students with a grounding in film theory, history, and practical filmmaking. This two-year course combines creative production with significant academic written work, including an additional collaborative film project component for HL students. Students should expect to spend one and a half to two hours per week on homework outside of class time.

Main Topics
- Developing a film portfolio across various production roles
- Directing, editing, cinematography, screenwriting and designing sound for film
- Textual analysis of prescribed films
- Film theory, movements, genres and styles
- Film history and cultural contexts
- Video Comparative Study of films from contrasting cultures
- Collaborative film project (7-minute film with supporting essay)

Learning Outcomes
- Complete Textual Analysis (1,750-word essay on a five-minute section of a prescribed film)
- Create comparative study (10-minute video presentation on two films from contrasting cultures)
- Develop film portfolio demonstrating best work across three production roles, with written reflections
- Complete Collaborative Film project (7-minute film with supporting 2,000-word essay)
- Demonstrate advanced understanding of film
- Analyze films from multiple cultural perspectives
- Work effectively in various film production roles

IB Visual Arts SL Year 2

Prerequisites: IB Visual Arts SL Year 1
Grade levels: Grade 11
Course Description

This two-year course is intended for students with a serious interest in the visual arts and a high level of commitment to both studio work and deep research. The Higher Level program requires more extensive work than Standard Level.

Main Topics
- Curate- visual (and written) materials to communicate meaning.
- Investigate- by to researching, exploring, and experimenting
- Generate- by connecting concepts and forms in new ways to create art.
- Refine- by making changes and adapting ideas, strategies, forms, techniques and media, or any aspect of visual language, to better fulfil artistic intentions.
- Resolve- by completing artwork.
- Situate- by consider an idea or form in relation to time and place.
- Synthesize- by bringing together disparate elements in a meaningful combination

SL Learning Outcomes
- Exploration and documentation of experimentation of a variety of art-making forms and creative strategies
- Development of Inquiry Questions and Generative Statements
- Critical Reflections
- Comparative Analysis of 2 Artworks by other artists, and student's own artwork
- Comparative Analysis of student's own artwork
- Three completed artworks
- Explanation of concepts, intentions, and techniques

HL Learning Outcomes
- Artist Project
- Video of Artist Project and Statement of artistic intentions
- Five completed artworks and five artwork texts
- Rationale explaining concepts, intentions, and techniques
- A Selection Chart

PERFORMING ARTS COURSES

Performing Arts Department Flow Chart

Grade 9 students may choose any of the courses below based on meeting prerequisites:

- Concert Band: Beginning (Grade 9 only)
- Concert Band: Intermediate*
- Concert Band: Advanced*
- Advanced Choir * (Grade 9-12)
- Contemporary Music
- Orchestra: Prelude
- Orchestra: Intermezzo*
- Orchestra: Finale*
- Orchestra: Advanced*
- Dance 1/Dance 2
- Theatre 1/ Theatre 2

Grade 10 students may choose any of the courses below based on meeting prerequisites:

- Concert Band: Intermediate*
- Concert Band: Advanced*
- Advanced Choir* (Grade 9-12)
- Contemporary Music
- Contemporary Music 2
- Orchestra: Prelude
- Orchestra: Intermezzo*
- Orchestra: Finale*
- Orchestra: Advanced*
- Dance 1/Dance 2
- Theatre 1/ Theatre 2

Grade 11 and 12 students may choose any of the courses below based on meeting prerequisites:

- Concert Band: Intermediate*
- Concert Band: Advanced*
- Advanced Choir * (Grade 9-12)
- Contemporary Music
- Contemporary Music 2
- Orchestra: Prelude
- Orchestra: Intermezzo*
- Orchestra: Finale*
- Orchestra: Advanced*
- IB Music SL/HL (two year course)
- IB Dance SL/HL (two year course)
- Theatre 1/ Theatre 2
- IB Theatre SL/HL (two year course)

Legend

- AP course
- IB course
- SAS course

* Requires teacher approval.

PERFORMING ARTS INTRODUCTION

The Performing Arts Program is a cornerstone of the SAS curriculum, which seeks to balance academics with educating the "whole person." The constant aspiration of the Performing Arts Program at SAS is to create an exhilarating environment that nurtures every student's sensitivity, understanding, and enjoyment of the arts. Performing Arts course options include Dance, Drama/Theatre, Music.

It is always encouraged that students continue with the Performing Arts in order to develop their performance skills, to gain a deeper understanding of different styles and genres, for continued confidence in an expressive area of knowledge, and/or to consider or prepare for career choice options. A sustained effort in the arts along with a strong academic effort often attracts the attention of college admissions officers.

Dance

Dance is a unique form of expression that fosters creativity, communication, and collaboration. Students will develop strength, flexibility, and control while exploring a variety of dance styles.

Open to all students, this course enhances physical fitness, refines athletic abilities, and builds recreational or performance-based dance skills. It combines exercises, technique, and choreography to improve agility, balance, endurance, and posture. Students will engage with styles like ballet, contemporary, jazz, hip-hop, and folk dance, creating original choreography inspired by these forms.

The curriculum also includes opportunities to evaluate dance critically, apply injury prevention techniques, and explore elements of dance history. Students will perform in class, participate in community performances, and showcase their work at the semester show, highlighting their growth and creativity.

This course fulfills Performing Arts elective requirements for Grades 9–12 and Physical Education elective requirements for Grades 11–12.

Drama and Theatre

Drama and Theatre courses aim to help students understand the nature of performance through theatre; to understand it by making it as well as by studying it; to understand it not only with their minds but with their senses, their bodies, and their emotions; to understand the forms it takes in cultures other than their own; and through this understanding to better understand themselves, their society, and their world. The overarching goals of these courses is to develop an understanding of the arts of drama and theatre, their application to daily life, and the enjoyment of theatre as an art form.

IB Theatre is a combination of performance, production, analysis and study of western and non-western, ancient and modern theatre. The aim of the IB Theatre course is to help students' understanding of the nature of theatre; to understand it by making it as well as by studying it; to understand it not only with their minds but with their senses, their bodies and their emotions; to understand the various forms it takes in cultures other than their own; and through this understanding endeavor to better understand themselves, their society, and their world.

Students in all Theatre classes are expected to see live theatre as part of their course, and as such excursions to see performances in Shanghai will be arranged. Artists in Residence are often also invited in to help students get expertise in specialist areas. Students may also audition for the regional APAC Theatre festival and are invited each year to participate in an international theatre festival with ISTA (International Schools Theatre Association).

Music

The PDHS Music Program includes classes in Band, Choir, Orchestra and Contemporary Music. In all music classes, students connect and perform music together in both small ensembles and full ensembles. Students have the opportunity to create their own music compositions through music notation software. Students also respond to music through a variety of written assessments.

Through an audition process, the music teachers will assist students in determining an appropriate level of ensemble. There is one Choir class, two Band classes, and five Orchestra classes. Students with more experience will be placed in the Advanced Band or Orchestra while the other classes are for students with less experience.

The Bands, Choir, and Orchestras perform at least two major concerts per year. Students may also audition for participation in the regional (APAC) and/or international (AMIS) music festivals. Other opportunities available to students in these classes include participating in the AMIS Online Solo & Ensemble Festival or the AMIS Young Composer's Competition.

Students may take up to four years of Band, Choir, or Orchestra and receive credit for all four years.

Advanced Choir

Prerequisites: Current teacher recommendation and/or audition
Grade levels: Grade 9–12
Course Description

Advanced Choir is open to students with basic singing experience who want to excel at performing, creating, and responding to a variety of music genres. Through this course, students will increase their knowledge of and fluency with musical terminology, history, and style. Public performance is a required component, and students are assessed through the National Common Core Arts Standards.

Main Topics

- Vocal technique and pitch matching
- Music reading and sight-singing
- Musical terminology and theory
- Music history and style across genres
- SAB and SATB repertoire with divisi
- Performance preparation and stage presence
- Ensemble collaboration and listening skills
- Regional and International Music Festival opportunities

Learning Outcomes

- Perform choral music accurately with proper vocal technique
- Read and interpret sheet music independently
- Demonstrate understanding of musical terminology, history, and style
- Create and respond to music across various genres
- Collaborate effectively within an ensemble setting
- Apply listening skills to match pitch and blend with others
- Perform confidently in public settings
- Analyze and evaluate musical performances using Common Core Arts Standards

Dance

Prerequisites: None (Open to all students)
Grade levels: Grade 9–12
Course Description

Dance is a unique form of expression that fosters creativity, communication, and collaboration. Students will develop strength, flexibility, and control while exploring a variety of dance styles. This course integrates dance-making, performance, and critical reflection to develop students as creative artists and informed audience members, enhancing their technical proficiency, artistic expression, and understanding of dance as a dynamic art form within cultural and historical contexts.

Main Topics

- Ballet technique and fundamentals
- Contemporary dance exploration
- Jazz dance styles and movement
- Hip-hop choreography and culture
- Folk dance traditions
- Original choreography creation
- Dance history and cultural context
- Injury prevention and body awareness

Learning Outcomes

- Build foundational technique across multiple dance styles and movement vocabularies
- Create original choreography using basic compositional tools and choreographic devices
- Perform with growing artistic intention, expression, and physical control
- Analyze and evaluate dance works using appropriate terminology and critical frameworks
- Demonstrate understanding of dance within historical, cultural, and social contexts
- Reflect critically on personal artistic development and creative processes
- Collaborate effectively in ensemble work and peer feedback processes
- Apply safe dance practices and injury prevention strategies

IB Dance (SL & HL)

Prerequisites: Dance or equivalent dance experience (teacher recommendation required)
Grade levels: Grade 11–12
Course Description

IB Dance is a rigorous two-year course that develops students as dancers, choreographers, and critical thinkers within the art form. Students engage deeply with the three interconnected strands of dance-making, performance, and dance in context. Through sustained practice, creative exploration, and analytical study, students develop their artistic voice while examining dance as a dynamic art form across diverse cultural, historical, and contemporary contexts. Higher Level students undertake extended choreographic and performance work with greater depth and complexity.

Main Topics

- Advanced technique in multiple dance styles
- Choreographic processes and compositional structures
- Solo and ensemble performance development (HL: extended solo performance)
- Dance analysis and critical response
- World dance traditions and cultural contexts
- Contemporary dance practices and practitioners
- Dance research and investigation (HL: collaborative project)
- Comparative dance studies

Learning Outcomes

- Demonstrate technical proficiency and artistry in performance across diverse styles
- Create sophisticated original choreography using advanced compositional tools and processes
- Perform solo and ensemble works with artistic maturity, intention, and expression
- Analyze and evaluate dance works critically using specialized terminology and frameworks
- Research and articulate connections between dance and its cultural, historical, and social contexts
- Reflect deeply on personal artistic development through ongoing documentation and evaluation
- Collaborate effectively as both creator and performer in choreographic processes (HL: lead collaborative projects)
- Communicate dance knowledge through written, oral, and embodied forms

IB Music (SL & HL)

Prerequisites: Current teacher recommendation and/or audition
Grade levels: Grade 11–12 (two-year course)
Course Description

IB Music is a dynamic, integrated course where students develop their identity and potential as musicians through inquiry into creative practice and performance processes. Students embrace the roles of researcher, creator, and performer while developing listening, creative, and analytical skills alongside cultural understanding and international mindedness. This inclusive, student-centered course welcomes classically trained musicians, vocalists, singer-songwriters, electronic musicians, and students who play traditional instruments.

Main Topics

- Music exploration across personal, local (Shanghai), and global contexts
- Creative composition and arranging
- Performance techniques and interpretation
- Music technology as a creative and performance tool
- Music analysis and critical listening
- Cultural and historical perspectives on music
- Research and documentation of musical processes
- Collaborative music-making practices (HL extended)

Learning Outcomes

- Develop identity and potential as a musician across multiple roles
- Create original compositions using diverse musical styles and technologies
- Perform music with technical proficiency and artistic expression
- Analyze and evaluate music from various cultural and historical contexts
- Apply music technology effectively in creative and performance settings
- Demonstrate cultural understanding and international mindedness through music
- Document and reflect on musical processes through journal work
- Design and present an original multimedia music project (HL only)

Intermezzo Orchestra

Prerequisites: Two years of experience or teacher recommendation
Grade levels: Grade 7–12
Course Description

Intermezzo Orchestra is designed for developing violin, viola, cello, and double bass players who have at least two years of playing experience. Students strengthen instrumental technique, ensemble awareness, and music literacy through rehearsing and performing a wide range of orchestral repertoire (Music grade level 2 – 3). Learning is aligned with the US National Core Arts Standards, and public performance is a required component of the course.

Main Topics

- Instrument technique, posture, tone, and beginning vibrato
- Music reading, theory, and fluency in varied keys and meters
- Ensemble balance, blend, intonation, and rhythmic precision
- Introduction to shifting, third and fourth positions
- Rehearsal strategies and practice techniques
- Historical and stylistic context in orchestral music
- Performance preparation and stage presence
- Regional and international music festival opportunities

Learning Outcomes

- Perform orchestral repertoire with improving tone, intonation, articulation, and musical expression
- Demonstrate accurate reading of notation, rhythms, key signatures, and time signatures
- Apply ensemble skills to maintain balance, blend, and group intonation
- Show growing technical fluency, including shifting and early vibrato
- Use rehearsal strategies to refine both individual and ensemble performance
- Interpret musical works with awareness of style and historical context
- Evaluate performances using musical vocabulary and established criteria
- Collaborate responsibly and effectively as a member of the ensemble

Finale Orchestra

Prerequisites: Three years of experience or teacher recommendation
Grade levels: Grade 8–12
Course Description

Finale Orchestra is an advanced ensemble for experienced violin, viola, cello, and double bass students who are ready to deepen their technical skills and musical understanding. Through the study of challenging orchestral literature, students refine technique, ensemble musicianship, and interpretive ability while exploring music from a variety of historical and cultural traditions. Learning aligns with the US National Core Arts Standards, and public performance is a required part of the course.

Main Topics

- Advanced instrumental technique: shifting, vibrato, extended positions, and 3-octave scales
- Ensemble precision, balance, blend, intonation, and interpretation
- Complex music reading, theory, mixed meter, and advanced key signatures
- Rehearsal strategies for individual refinement and ensemble excellence
- Orchestral literature across historical periods and global styles
- Aural skills, listening, and conductor awareness
- Performance preparation, stage presence, and professionalism
- Regional and international music festival and field trip opportunities

Learning Outcomes

- Perform advanced orchestral repertoire with strong technical accuracy, tone quality, and expressive interpretation
- Demonstrate fluency in reading complex rhythms, key signatures, mixed meters, and extended notation
- Apply mature ensemble skills to achieve precision, balance, and cohesive musical expression
- Refine individual technique through shifting, vibrato, extended positions, and multi-octave scales
- Analyze and evaluate performances using musical terminology and established criteria
- Show understanding of historical, stylistic, and cultural contexts in orchestral music
- Use rehearsal strategies to improve both independent and ensemble musicianship
- Collaborate responsibly and effectively as a contributing member of a high-level ensemble

Prelude Orchestra

Prerequisites: None
Grade levels: Grade 9–12
Course Description

Intermezzo Orchestra is designed for developing violin, viola, cello, Prelude Orchestra is a beginning-level ensemble for students who are new to string instruments and interested in exploring music through violin, viola, cello, or double bass. Students learn foundational playing skills, music-reading, and ensemble habits through guided instruction and age-appropriate repertoire. Public performance is a required part of the course, and learning aligns with the US National Core Arts Standards.

Main Topics

- Basic instrument setup, posture, and bowing
- Introduction to music reading, pitch, rhythm, and notation
- Foundational fingerings, tone production, and intonation
- Beginning ensemble skills: balance, blend, and following a conductor
- Aural skills and listening development
- Practice routines and performance habits
- Beginning music theory and vocabulary
- Stage presence and concert preparation

Learning Outcomes

- Demonstrate correct posture, bow hold, and basic playing technique
- Read and perform simple rhythms, notes, and musical symbols
- Play beginning-level repertoire with improving tone, intonation, and steady rhythm
- Follow a conductor and play cooperatively within an ensemble
- Use listening skills to adjust pitch, blend, and group sound
- Apply basic practice strategies to improve individual performance
- Describe and evaluate musical performances using simple musical vocabulary
- Perform confidently in required concerts and classroom showcases

Advanced Orchestra

Prerequisites: Audition
Grade levels: Grade 9–12
Course Description

Advanced Orchestra is an auditioned ensemble for experienced violin, viola, cello, and double bass students who wish to refine their technique and expand their musical artistry. Students perform high-level string orchestra repertoire, explore symphonic works when instrumentation allows, and participate in a favorite unit: student-led chamber music, where they form their own groups, choose repertoire, and learn to rehearse independently. Learning aligns with the US National Core Arts Standards, and public performance is a required component of the course.

Main Topics

- Advanced instrumental technique, tone production, and technical accuracy
- String orchestra repertoire across styles, eras, and difficulty levels
- Symphony orchestra playing opportunities when instrumentation and repertoire permit
- Chamber music: student-led group formation, repertoire selection, rehearsal strategies, and performance
- Ensemble precision, balance, blend, intonation, and expressive interpretation
- Music literacy, theory, aural skills, and complex rhythmic/tonal reading
- Rehearsal strategies for self-directed improvement and ensemble refinement
- Performance preparation, stage presence, and professionalism
- Regional and international music festival and field trip opportunities

Learning Outcomes

- Perform advanced string and symphonic repertoire with refined tone, accuracy, musical expression, and stylistic understanding
- Demonstrate fluency in reading complex notation, rhythms, articulations, key signatures, and mixed meters
- Collaborate effectively in chamber groups by making musical decisions, organizing rehearsals, and preparing polished performances
- Apply mature ensemble skills to achieve precision, balance, blend, and musical coherence across both small and large ensembles
- Analyze and evaluate performances using musical terminology and established criteria
- Show understanding of historical and stylistic contexts across chamber, string orchestra, and symphonic literature
- Use independent rehearsal strategies to improve both personal musicianship and ensemble performance
- Prepare confidently for high-level public performances and festival participation

Concert Band: Intermediate

Prerequisites: One year of experience or teacher recommendation
Grade levels:
Course Description

Intermediate Band is a one-year course for all Woodwind, Brass and Percussion players who have at least one year of experience on their instrument. Specific instrument techniques, ensemble skills, theoretical literacy and historical awareness will be developed through performance and rehearsal. Students are assessed through National Common Core Arts Standards and public performance is a requirement.

Main Topics

- Playing instruments with characteristic tone and good intonation
- Knowledge and practical application of key centers and scales
- Ensemble performing skills such as blend, balance, intonation, rhythmic accuracy and pulse
- Increasing range of notes (high and low)
- Read music effectively and play their own part accurately in each piece rehearsed
- Demonstrate a knowledge of the history and styles of the music being played
- Breath support and techniques to achieve proper breath support
- Effective audition/performing preparation techniques
- Collaborative skills and independent preparation for performance

Learning Outcomes

- Perform at a variety of festivals, events and concerts
- Demonstrate knowledge of and attention to ensemble skills in performance
- Increased understanding and application of more complex rhythms, key centers, articulations and performing styles
- Evaluate and reflect independently on the performance process
- Increased technical proficiency on instrument
- Independently prepare pieces for public performance with attention to detail
- Create music given specific criteria

Concert Band: Advanced

Prerequisites: One year of experience or teacher recommendation
Grade levels:
Course Description

Advanced Band is a one-year course open to all Woodwind, Brass and Percussion players who have at least three years of experience on their instrument. Specific instrumental technique, ensemble skill, theoretical literacy and historical awareness will be developed through performance. Students are assessed through the National Common Core Arts Standards and public performance is a requirement of the course.

Main Topics

- Playing instruments with characteristic tone and good intonation
- Practical application of key centers, scales and modes
- Ensemble performing skills including blend, balance, intonation, rhythmic accuracy and pulse
- Demonstrating advanced knowledge of time and key signatures, rhythms and pitches
- Sight reading music effectively
- Playing their part in an ensemble piece with skill and confidence
- Demonstrate knowledge of the history and styles of music
- Breath support and techniques to achieve proper breath support
- Effective audition/performing preparation techniques
- Collaborative skills and independent preparation for performance

Learning Outcomes

- Perform at a variety of festivals, events and concerts
- Demonstrate knowledge of and attention to ensemble skills in performance
- Demonstrate knowledge of effective concert etiquette
- Collaborate effectively with large and small peer groups
- Evaluate and reflect independently on the performance process
- Increased technical proficiency on instrument
- Independently prepare pieces for public performance with attention to detail

- Create music given specific criteria
- Through writing, reflect and respond given criteria

Contemporary Music

Prerequisites: : None (open to all students)
Grade levels: Grade 9–12
Course Description

This comprehensive course explores music history, theory, and practical applications with a specific focus on music production and technology. Students combine theoretical learning with hands-on experience to master the fundamental concepts, tools, and techniques used in the modern music industry.

Main Topics

- Music theory fundamentals and harmonic analysis
- Digital audio workstations (DAWs) and production software
- Recording, mixing, and mastering techniques
- Sound design and audio effects
- Collaboration and music creation in digital environments
- Music technology and industry standards
- Career pathways in music production and the music industry

Learning Outcomes

By the end of this course, students will be able to:

- Demonstrate proficiency in using industry-standard music production software and equipment
- Apply music theory concepts to compose and arrange original pieces
- Execute professional recording, mixing, and mastering workflows
- Design and manipulate audio using synthesizers and effects processors
- Analyze and critique contemporary music from technical and artistic perspectives
- Collaborate effectively on creative music projects with peers
- Understand the role of technology in shaping modern music creation and distribution
- Develop a portfolio of original work showcasing their creative and technical abilities

Pathway Note: This course serves as an excellent foundation for students considering the IBDP Music course or pursuing further studies and careers in music production, audio engineering, or the music industry.

Contemporary Music 2

Prerequisites: : Contemporary Music or equivalent experience with digital audio workstations (DAWs)
Grade levels: Grade 10–12
Course Description

This advanced course builds upon foundational skills in digital audio workstations (DAWs) and music composition developed in Contemporary Music. Designed for self-directed, project-based learning, this course emphasizes advanced music theory, composition, and digital audio production techniques. Students apply their knowledge in open-ended, multimedia projects that promote creative autonomy and foster inquiry-based learning while preparing them for higher-level music study.

Main Topics

- Advanced music theory and harmonic analysis
- Composition and arrangement for various ensembles and media
- Advanced DAW techniques and workflow optimization
- Multimedia and interactive music production
- Audio engineering and professional production standards
- Music technology innovation and emerging tools
- Portfolio development and professional presentation

Learning Outcomes

By the end of this course, students will be able to:

- Execute sophisticated digital audio production workflows with professional-quality results
- Integrate multimedia elements into music projects for creative expression
- Analyze and critique advanced contemporary music compositions critically
- Demonstrate mastery of advanced DAW features and audio engineering principles
- Develop independent creative projects that showcase artistic vision and technical expertise
- Collaborate on complex, interdisciplinary music projects with peers
- Prepare a professional portfolio demonstrating readiness for IB-level study or music industry careers

Pathway Note: This course serves as a critical pathway for students aspiring to continue their music education at the IB level or pursue advanced studies and careers in music production, composition, and audio engineering.

Theatre 1

Prerequisites: : None (open to all students)
Grade levels: Grade 9–10
Course Description

This foundational theatre course begins with ensemble-building activities that develop group rapport and collaborative skills. Students explore modern theatre theorists and apply their techniques to create original devised theatre pieces for authentic audiences. Through improvisation, scripted play analysis, and hands-on experience in directing, designing, and performing, students develop creative confidence, critical thinking, and the ability to think on their feet—essential skills for success in any field.

Main Topics

- Ensemble building and collaborative theatre practices
- Modern theatre theorists and their acting techniques
- Devised theatre creation and original performance
- Improvisation and spontaneous creative expression
- Script analysis and interpretation
- Directing and theatrical production
- Technical theatre design and stagecraft
- Performance, reflection, and self-assessment

Learning Outcomes

By the end of this course, students will be able to:

- Collaborate effectively with peers to build ensemble cohesion and trust
- Apply modern theatre techniques to create and perform original devised work
- Demonstrate improvisation skills and creative spontaneity in performance
- Analyze and interpret scripted plays with understanding of character and dramatic intent
- Direct, design, and execute technical elements of theatrical productions
- Perform with confidence and authenticity in front of live audiences
- Reflect critically on their own work and the work of others through multiple formats
- Develop creative problem-solving and adaptability skills applicable beyond theatre

Theatre 2

Prerequisites: Theatre 1
Grade levels: Grade 10–12
Course Description

This intermediate theatre course deepens students' understanding of drama as a collective art form that develops empathy and communication skills. Students analyze, interpret, and perform theatrical works from various cultures and time periods, exploring universal aspects of human experience. Through workshops in characterization, monologue, voice, and scene work, combined with one-act play production, students develop proficiency as performers, directors, designers, and critical audience members while reflecting on their artistic growth and ensemble contributions.

Main Topics

- Drama from various cultures and historical periods
- Character development and characterization techniques
- Monologue and scene work
- Voice, movement, and physical expression
- One-act play production and performance
- Roles in theatre: playwright, director, actor, producer, designer, technician
- Script analysis and dramatic interpretation
- Reflection, self-assessment, and artistic growth

Learning Outcomes

By the end of this course, students will be able to:

- Analyze and interpret dramatic works from diverse cultures and historical contexts
- Develop and perform complex characters with depth and authenticity
- Execute effective monologues and scene work with technical proficiency
- Demonstrate control of voice, movement, and physical expression in performance
- Understand and execute the various roles involved in theatrical production
- Create and perform original one-act plays with artistic vision
- Develop empathy and understanding of universal human experiences through drama
- Reflect critically on personal artistic growth, ensemble work, and the art of theatre

IB Theatre SL/HL Y1-Y2

Prerequisites: Recommended Theatre 1 or Theatre 2
Grade levels: Grade 11–12
Course Description

IB Theatre celebrates the international and intercultural dynamics that inspire diverse forms of theatre worldwide. Through practical engagement as "theatre makers," students explore theatre in the making, in performance, and in the world, developing clarity of understanding, critical thinking, reflective analysis, and imaginative synthesis. Students engage in independent research, application, and reflection through ensemble-based work, exploring different theatre traditions in their historical contexts while challenging established conventions and developing confidence to create innovative, collaborative projects.

Main Topics

- Theatre traditions and their historical and cultural contexts
- Theatre practitioners and their methodologies
- Ensemble-based creative processes and collaboration
- Devised and scripted theatre creation
- Performance analysis and critical interpretation
- Theatre in the world: contemporary and intercultural theatre
- Individual and collaborative artistic development
- Research, reflection, and theoretical understanding of theatre

Learning Outcomes

By the end of this course, students will be able to:

- Analyze and interpret theatre traditions within their historical and cultural contexts
- Apply theatre practitioner methodologies to creative work
- Develop and execute performances as individual artists and ensemble members
- Conduct independent research and critical analysis of theatrical works and concepts
- Create innovative devised and scripted theatre that challenges conventions
- Demonstrate reflective practice and articulate artistic growth through written and practical work
- Understand and engage with intercultural and contemporary theatre forms
- Synthesize theoretical knowledge with practical theatrical creation and performance

APPLIED ARTS COURSES

Applied Arts Department Flow Chart

Students in Grade 9–12 may take:

Electrical and Mechanical Design

Engineering and Robotics

Electrical and Mechanical Design

Course Code: 6066
Duration: Year
Prerequisites: None
Credit: 1.0

In this course, students will use the design cycle to create innovative solutions for real world scenarios. Over the course of the year, students will develop and apply coding skills, engage with Computer Aided Design, use microcontrollers, 3D printers, laser cutters, while working with resistant materials.

Using skills learned in class students will develop highly evolved prototypes, demonstrating their mastery of both practical skills and conceptual design.

Electrical and Mechanical Design is a course open to all students, regardless of prior experience, interests, or skills and can be taken Grades 9-12.

Engineering and Robotics

Course Code: 6067
Duration: Year
Prerequisites: None
Credit: 1.0

Students will explore engineering and robotics through the design cycle with an emphasis on innovative problem solving to deal with real world scenarios. This course is designed to expose students to engineering concepts as well as learning to design, build and program robotic and automated systems using the VEX V5 robotics platform.

With additional access to microcontrollers, 3D printers, laser engravers, CNC machines and mechanical tools, students will have the opportunity to develop highly evolved prototypes, demonstrating their mastery of both practical skills and conceptual design.

Engineering and Robotics is a course open to all students, regardless of prior experience interests, or skills and can be taken Grades 9-12.

NEW - SAS GENERATIVE TECHNOLOGIES & APPLIES ENGINEERING (GTAE) PATHWAY

SAS is introducing a new Pathway for students interested in disciplines related to Generative Technology and Applied Engineering.

Overview of Pathway:

<table>
<tr><th>Grade 9-12</th><th>Grade 10-11-12</th><th>Grade 11-12</th></tr>
<tr><td>Foundational Year
Quarterly Courses
NEW 2026-27</td><td>Semester Courses
Non-sequential
NEW 2027-28</td><td>Full Year Course</td></tr>
<tr><td>Introduction to Robotics
(Robotics & Automation)</td><td>Advanced Physical Computing</td><td rowspan="7">Engineering & Entrepreneurship
Capstone Project/Lab
NEW 2026-27</td></tr>
<tr><td>Introduction to
Product Design & Manufacturing</td><td>Machine Learning
(deeper dive into AI)</td></tr>
<tr><td rowspan="2">Introduction to Physical Computing</td><td>Generative Tech
(LLMs on Raspberries & Machine Learning)</td></tr>
<tr><td>Game Design</td></tr>
<tr><td>Introduction to Applied Engineering</td><td>Immersion Lab
(offsite immersion & onsite lab)</td></tr>
<tr><td>Introduction to Python Programming
for Engineers</td><td>Product Development</td></tr>
<tr><td rowspan="2">Introduction to Design Theory
(for students new to SAS or without Middle School Design Technology experience)</td><td>Cyber Security</td></tr>
<tr><td colspan="2">AP & IB Courses</td></tr>
<tr><td colspan="3">ASAs/Clubs</td></tr>
</table>

Please note that any combination is possible. Below are some ideas for possible Pathways to consider:
Interest in Robotics and Engineering: Introduction to Robotics, Introduction to Product Design & Manufacturing, Introduction to Physical Computing, and Applied Engineering.
Interest in Computer Science and Physical Computing: Introduction to Coding for Engineers, Introduction to Physical Computing, Introduction to Robotics, Intro to Applied Engineering.
Interest in Design: Introduction to Design Theory, Applied Engineering, Applied Manufacturing, and Capstone
Follow your own interests: Any combination that gives you the experiences you seek.

NEW COURSES 2026-27

Introduction to Robotics (Robotics & Automation)

Course Code: HS0009
Duration: Quarter
Prerequisites: None
Credit: 0.25

This quarter-length course introduces students to core robotics concepts using VEX V5 as a platform. Students explore building drivetrains, mechanisms, and structures while developing an understanding of how to use sensors and actuators. Students will use programming to create autonomous behaviors in their automated systems. Emphasis is on hands-on building, testing and debugging, giving students a tangible sense of how hardware and software interact while preparing them for more advanced robotics and physical computing pathways.

Introduction to Product Design & Manufacturing

Course Code: HS0009
Duration: Quarter
Prerequisites: None
Credit: 0.25

Designed as an accessible entry point into manufacturing and product design, this quarter-length course focuses on how real products are made at scale. Students use CAD tools to design parts, then prototype them using digital fabrication and workshop tools. The course emphasizes tolerances, limits and fits, fasteners, and small-batch production. Along the way, they encounter key ideas such as batch vs continuous production, basic quality control and simple costing, positioning this course as a bridge toward more advanced manufacturing or product development offerings and the eventual Capstone, where students must show how a product could be made in industry.

Introduction to Physical Computing

Course Code: HS0009
Duration: Quarter
Prerequisites: None
Credit: 0.25

Transform from curious beginner to confident maker by building interactive electronic projects that respond to the world around them.

You'll master circuit design and Arduino programming, progressing from basic LED circuits to working with sensors (temperature, distance, light) and actuators (motors, servos, buzzers). Learn practical skills like soldering, multimeter use, and systematic troubleshooting while building hands-on projects every step of the way.

The course culminates in a final project where you'll combine multiple components—imagine building an obstacle-avoiding robot, smart plant monitor, or interactive light-responsive instrument. From blinking LEDs to integrated systems—your journey into physical computing starts here.

Introduction to Applied Engineering

Course Code: HS0009
Duration: Quarter
Prerequisites: None
Credit: 0.25

Applied Engineering is a quarter-length hands-on course where students learn to turn ideas into functional physical prototypes. They are introduced to the engineering design process and apply it to design, build, test, and refine products that solve practical challenges. Using CAD alongside tools such as 3D printers, laser cutters, and basic workshop machinery, students develop confidence with materials, fabrication techniques, systems and control, and project management. The course sits at the intersection of Design Technology and Engineering, reinforcing skills that support future work in product development, robotics, and manufacturing.

Introduction to Python Programming for Engineers

Course Code: HS0009
Duration: Quarter
Prerequisites: None
Credit: 0.25

This course teaches you Python—the programming language you'll use throughout the engineering pathway for robotics and physical computing. Before building complex hardware projects, you need to think like a programmer, and that's what this course is all about.

You'll learn:

- Core Python fundamentals – variables, data types, loops, conditionals, and functions
- Problem-solving with algorithms – breaking down complex problems into logical steps
- Data structures – lists, dictionaries, and how to organize information effectively
- Debugging skills – finding and fixing errors systematically
- Version control with Git/GitHub – tracking your code changes and collaborating with others

While the focus is on software and programming logic, you'll also work with basic circuits and microcontrollers to see your code come to life—reinforcing what you learn and connecting it to real-world applications. By the end of this course, you'll be ready to write code that controls sensors, motors, and autonomous systems in future Physical Computing and Robotics courses.

This course establishes the programming foundations students need for computer science and hardware-related pathways. Using Python as the primary language, students learn core concepts such as variables, control structures, functions, and basic data structures, along with good debugging habits. The course introduces version control with Git/GitHub to support collaborative and iterative work. While primarily software-focused, it maintains a clear link to physical computing and robotics by framing programming as the logic layer behind sensors, control systems and autonomous behavior in later courses.

Introduction to Design Theory

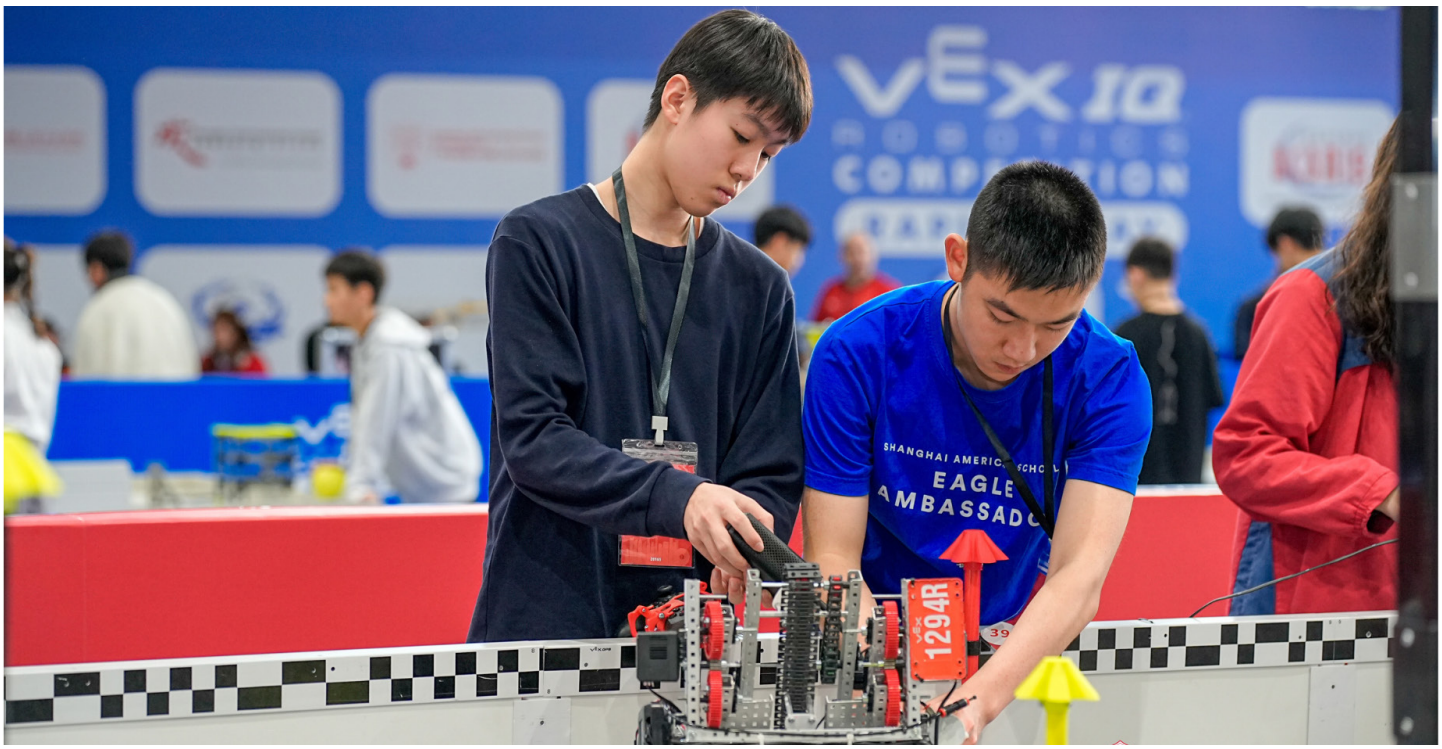
Course Code: HS0009
Duration: Quarter
Prerequisites: for students new to SAS or without Middle School Design Technology experience
Credit: 0.25

Intended especially for students new to SAS or without Middle School Design Technology experience, Design Theory provides a gateway into design thinking and workshop culture. Students learn fundamental design principles that apply to both physical and digital products, practice low-fidelity prototyping, and experience user-centered design processes such as empathy, ideation, rapid iteration and critique. The course also introduces essential workshop and lab safety expectations so that all students reach a common baseline of competence and confidence before moving into more technical GTAE courses.

Engineering Capstone

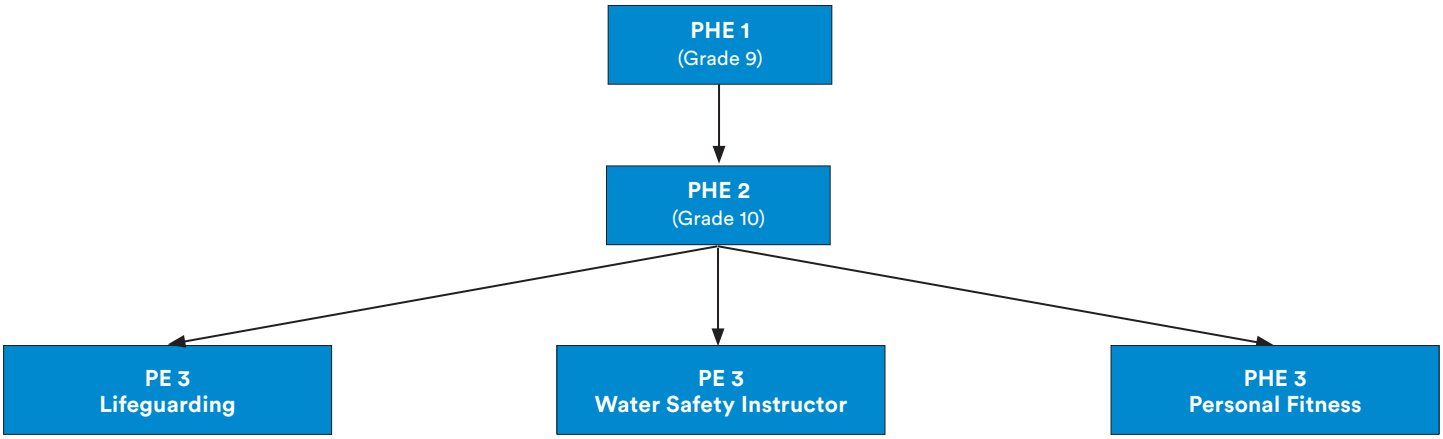
Course Code: HS8406
Duration: Year
Prerequisites: 2 Applied Arts or Equivalent credits
Credit: 1.0

The Engineering Capstone is a full-year, project-based course in which students draw on skills from prior GTAE courses to take a self-directed product from concept to market-ready prototype. Students conduct user research, define and validate problems, design and iteratively prototype physical, digital, and/or hybrid solutions, and plan how they could be manufactured at scale. In parallel, students develop entrepreneurial competencies—market testing, basic business modeling, costing and pitching—supported by experts-in-residence and external feedback. The year culminates in a professional-level demonstration and portfolio that showcases end-to-end engineering and product development capability.



PHYSICAL AND HEALTH EDUCATION COURSES

Physical and Health Education Department Flow Chart



INTRODUCTION:

Physical & Health Education at Shanghai American School is a health and fitness-based program that aims to instill in students a desire to pursue lifelong wellness.

The goal is to promote healthy active living, enjoyment of regular physical activity, and student development of:

- An understanding of the importance of physical fitness, health, and well-being and the factors that contribute to them
- A personal commitment to daily physical activity and positive health behaviors
- The skills and knowledge students require participating in physical activities throughout their lives

The PE 1 & 2 courses are integrated with 15% health and 85% physical education and are required courses for graduation. PHE 3, Lifeguarding, Water Safety Instructor and Sport League advanced elective course are offered to students who are interested in a more
in-depth study of sport and exercise.

Physical & Health Education I (PHE I)

Prerequisites: None
Grade Level: Grade 9
Course Description

The PHE 1 course emphasizes the vital importance of health and fitness for maintaining lifelong wellness. Students develop motor skills and knowledge of biomechanical principles while practicing sportsmanship and cooperation through a variety of team and individual activities.

Main Topics

- Team Building 1
- Agility Balance & Coordination (ABC)
- Health Related Fitness – Cardiovascular Endurance & Heart Rate
- Movement Composition 1
- Force & Motion 1
- Swimming – G9
- Spatial Awareness 1
- Low Organized Games (LOG)

Learning Outcomes

- Develop motor skills in various physical activities.
- Understand biomechanical principles related to movement.
- Foster teamwork and sportsmanship.
- Make informed decisions regarding health and wellness.
- Understand the impact of drugs and alcohol.
- Explore topics in sexual education.
- Analyze current health-related events.
- Enhance overall fitness and wellness through practical engagement

Physical & Health Education II (PHE II)

Prerequisites: PHE I or equivalent
Grade Level: Grade 10
Course Description

The PHE 2 course focuses on encouraging students to take ownership of their health and wellness, building on concepts and skills from PHE 1. The course promotes active and healthy living through a variety of team and individual activities.

Main Topics

- Team Building 2
- Individual Pursuits / Speed & Velocity
- Health Related Fitness – Strength
- Movement Composition 2
- Force & Motion 2
- Swimming – G10
- Spatial Awareness 2
- Low Organized Games (LOG)

Learning Outcomes

- Reinforce motor skills developed in PHE 1.
- Promote active living and healthy lifestyle choices.
- Engage in social and emotional learning.
- Develop personal fitness and wellness plans.
- Assess and improve decision-making regarding health.
- Understand the importance of teamwork and cooperation.
- Participate in various team and individual sports.
- Demonstrate knowledge of fitness principles and practices

Physical & Health Education III (PHE III)

Prerequisites: Physical & Health Education I & II or equivalent
Grade Level: Grade 11–12
Course Description

This course is designed for students who have completed the PHE graduation requirement and wish to further develop their knowledge, skills, and physical fitness at an advanced level. Students will train together in total fitness units, focusing on personal fitness implementation and goal setting.

Main Topics

- Personal Fitness Program Design
- Goal Setting and Fitness Planning
- Current Trends in Weight Training
- Exercise Physiology
- Anatomy
- Nutrition
- Athletic Injuries
- Fitness Journaling

Learning Outcomes

- Develop and implement a detailed personal fitness program.
- Engage in goal setting and fitness planning.
- Understand foundational concepts of exercise physiology and anatomy.
- Explore nutrition principles related to fitness.
- Learn about injury prevention in sports and fitness.
- Keep a fitness journal to track progress and reflect on goals.
- Enhance leadership skills in fitness environments.
- Utilize technology effectively in sports and personal fitness programs

Pool Lifeguard

Prerequisites: Current First Aid certification (you will obtain it during the course as part of the PL certification) and demonstrate swimming proficiency
Grade Level: Grade 11–12
Course Description

This comprehensive training module equips student lifeguards and aquatic facility personnel with the essential knowledge, skills, and techniques required to safely and effectively respond to complex water rescue situations. Complex rescues involve multiple victims, injured persons, medical emergencies in water, or combinations of hazardous factors requiring coordinated team responses. Participants will develop competency in risk assessment, rescue equipment operation, spinal injury management, and emergency action plan implementation through both theoretical instruction and practical application.

Main Topics

- Roles, responsibilities, and boundaries in complex water rescue operations
- Organisational procedures, emergency action plans (EAP), and communication protocols
- Hazard identification and risk management strategies
- Rescue equipment selection and proper usage techniques
- Spinal injury management and local guideline compliance
- Multiple rescue techniques: talk, reach, throw, and swim/wade rescues
- Extraction procedures and casualty removal from water
- Post-rescue procedures: incident reporting, debriefing, and critical incident stress management

Learning Outcomes

Upon successful completion of this module, participants will be able to:

- Assess complex rescue situations and determine appropriate rescue actions using systematic risk assessment
- Execute proper spinal injury management techniques including vice-grip and extended arm rollovers
- Demonstrate proficiency with rescue equipment including rescue tubes, spinal boards, and resuscitation equipment
- Perform coordinated team rescues with clear communication and defined role allocation
- Apply defensive techniques and personal survival strategies to ensure rescuer safety
- Extract unconscious casualties from water using safe handling techniques and appropriate equipment
- Complete accurate incident reports and participate in effective post-rescue debriefing sessions
- Recognize signs of critical incident stress and access appropriate support resources

Swimming and Water Safety Teacher

Prerequisites: Minimum age 15 years at enrollment
Grade Level: Grade 11–12
Course Description

This entry-level certification course provides the competence and knowledge required to teach swimming and water safety to independent learners from ages 2.5 years upward, emphasizing safety, fun, and skill development. Delivered through a blended format combining online theory, face-to-face practical workshops, and supervised industry training, this recognized qualification prepares candidates to provide water-related personal safety and survival lessons. Upon completion, graduates receive a three-year SWIM Australia™ Teacher license. .

Main Topics

- Water rescue performance and emergency response procedures
- Swimming lesson planning and instructional design
- Water familiarisation, buoyancy, and mobility skill instruction
- Water safety and survival skills teaching methodologies
- Swimming stroke technique and progression instruction
- Child development and age-appropriate teaching strategies
- Risk assessment and aquatic facility safety management
- Professional standards and industry best practices

Learning Outcomes

Upon successful completion of this module, participants will be able to:

- Perform water rescues safely and effectively in aquatic environments
- Plan and design developmentally appropriate swimming lessons for diverse learner groups
- Teach water familiarization, buoyancy, and mobility skills to beginners and developing swimmers
- Deliver comprehensive water safety and survival skills instruction
- Instruct proper swimming stroke techniques with effective progressions and corrections
- Apply risk management strategies to ensure safe learning environments
- Demonstrate professional teaching practices aligned with aquatic industry standards
- Adapt teaching methods to accommodate individual learning needs and abilities

OTHER COURSES

IB Theory of Knowledge Y1/Y2

Course Code:8101 (Y1), 8102 (Y2)
Duration: Semester 2 (Y1), Semester 1 (Y2)
Grade: 11/12
Credits: 0.5 each

Theory of Knowledge is an elective course studying knowledge itself and investigating such questions as "How do you know what you know?"; "Can knowledge lead to truth?"; and "How do we integrate knowledge across personalities and cultures?" Students have the opportunity to step back from the relentless acquisition of new knowledge in order to consider the role of knowledge in their own lives and in world culture. Many students find it thought provoking and influential in developing their life goals and world view. In this class seminars and discussions are common, as are presentations, papers, journals, and group projects. Attendance and participation are key. TOK Y1 is taught in the second semester of Grade 11 and TOK Y2, which is the required continuation of the Y1 course, is taught in first semester of the Grade 12. IB assessments of one essay and one oral presentation are required in Y2.

AP Computer Science A

Course Code: 8201
Duration: Year
Prerequisites: None
Credits: 1.0

No prior programming experience is required.

This course is designed for students interested in careers in computer science, engineering, data analysis, and related fields, enhancing logical and algorithmic thinking while creatively solving real-world problems through Java programming.

AP Computer Science A is equivalent to a one-semester introductory college course in computer science and complements AP Computer Science Principles. Students may take these courses in any order or simultaneously.

Students will explore key concepts and tools of computer science while learning a subset of the Java programming language. They will engage in hands-on activities to design, write, and test computer programs that address real-world challenges. Skills developed include program design, algorithm development, code implementation, testing and debugging, and documentation of program functionality. Students will also cultivate essential soft skills such as attention to detail, patience, algorithmic thinking, and versatile problem-solving approaches.

All students enrolled in an AP subject must take the external exam at the end of the school year.

AP Computer Science Principles

Course Code: 8204
Duration: Year
Prerequisites: None
Credits: 1.0

No experience in programming required.
Recommended for students seeking to enhance their chosen fields with technological innovations and/or considering pursuing computer science and other related fields to develop their logical and algorithmic thinking, explore how the technology world works, and seize the opportunity to create their own programs using JavaScript.

AP Computer Science Principles is equivalent to a first-semester introductory college course in computing. This course is complementary to AP Computer Science A. Students can take these courses in any order or at the same time.

This course stands out for its emphasis on inspiring students to utilize creative processes that form the foundation of computer science, cultivating the critical thinking skills essential to the field. It encourages students to nurture computational thinking, a key asset for achieving success in various disciplines.

Students will learn the importance of collaboration in program development and how to implement an iterative process in their work. They will explore the handling of data by computers, discovering how it can lead to the generation of new information and effective problem-solving. Students will acquire the skills to use algorithms and abstractions to develop programs that address practical challenges or express their creativity. They will delve into the functioning of computer systems and networks, understanding how task distribution among multiple computers can expedite processes. Additionally, students will examine the profound effects of computing on societies, economies, and cultures, while contemplating the legal and ethical responsibilities that programmers bear.

All students enrolled in an AP subject must sit the external exam at the end of the school year.

AP Capstone Seminar

(Year 1 of Capstone Diploma or Certificate)

Course Code: 8202
Duration: Year
Credits: 1.0

This foundational course of the AP Capstone Program provides students with opportunities to think critically and creatively, research, explore, pose solutions, develop arguments, collaborate, and communicate using various media. Students explore real-world issues through a cross-curricular lens and consider multiple points of view to develop deep understanding of complex issues as they make connections between these issues and their own lives.

Students read articles, research studies, and foundational and philosophical texts; listen to and view speeches, broadcasts, and personal accounts; and explore artistic and literary works to gain a rich appreciation and understanding of issues. All students must sit the AP Seminar exam at the end of the year.

AP Capstone Research
(Year 2 of Capstone Diploma or Certificate)

Course Code: 8203
Duration: Year
Prerequisites: Must have taken AP Seminar and scored a 3 or higher.
Credits: 1.0

AP Research is the second course in the AP Capstone two-year program. Within AP Research students will design and execute an investigation on an original topic using a chosen inquiry method, which will culminate in an academic paper and a presentation with an oral defense. This year-long course will allow students to employ the skills they mastered in the AP Capstone Seminar Course the year before. The focus of the course this year will be on research methodology, employing ethical research practices, and accessing, analyzing, and synthesizing information.

IB Computer Science SL/HL Y1-Y2

Course Code: SL Y1 8115, HL Y1 8135
Duration: 2 Years
Prerequisites: None
Credits: 2.0

The Diploma Programme computer science course is engaging, accessible, inspiring and rigorous. During the course the student will develop computational solutions. This will involve the ability to; identify a problem or unanswered question; design, prototype and test a proposed solution; liaise with clients to evaluate the success of the proposed solution and make recommendations for future developments; think procedurally, logically, concurrently, abstractly, recursively and think ahead; utilize an experimental and inquiry-based approach to problem-solving; develop algorithms; and appreciate how theoretical and practical limitations affect the extent to which problems can be solved computationally. Note that, for full IB Diploma students, Computer Science counts toward Science credits.

Electrical and Mechanical Design

Course Code: 6066
Duration: Year
Prerequisites: None
Credits: 1.0

In this course, students will use the design cycle to create innovative solutions for real world scenarios. Over the course of the year, students will develop and apply coding skills, engage with Computer Aided Design, use microcontrollers, 3D printers, laser cutters, while working with resistant materials.

Using skills learned in class students will develop highly evolved prototypes, demonstrating their mastery of both practical skills and conceptual design.

Electrical and Mechanical Design is a course open to all students, regardless of prior experience, interests, or skills and can be taken Grades 9-12.

POLICIES REGARDING COURSES

Please review the information below. Teachers and counselors provide guidance and support to students throughout this process. We encourage students to ask questions, seek advice, and engage in dialogue with us as they consider their options.

Course Catalog

The Course Catalog is available for download from https://www.saschina.org/academics/high-school. The catalog includes descriptions, course codes, and prerequisites. Every department's courses are also represented by a flowchart that provides a snapshot of how each department's courses are sequenced. Students need to reference the course catalog in order to complete their course selection form. Some courses listed in the course catalog may not be offered if there is limited or no student interest. This may vary from year to year depending on student preference.

Course Preference Form

Students will receive a paper copy of the course preference form at the course preference meetings in January. All students will meet with their counselor and speak with their teachers about their course preferences as well as request their signatures to indicate the strength of their recommendation.

Override

If students are considering a course they have not been recommended by a teacher or counselor to take, they must complete the "Course Override" Form. In addition, overrides will require a parent(s) appointment with the counselor, or in lieu of a face-to-face appointment a phone conversation, to ensure the parent(s) have full understanding of the override process. These appointments will take place prior to students inputting their preferences on PowerSchool.

IB/AP Exam Fees

Please be aware that any appropriate IB/AP testing fees will be applied to student accounts in November at the same time as tuition for second semester. These fees are separate from and in addition to regular SAS tuition fees.

Schedule Changes

Please read the school's policy regarding schedule changes (in the student handbook). This policy will be reviewed with students at the course preferences meetings by the student's counselors.

Scheduling is a process that takes months to complete and involves matching teaching staff to student demand for courses. Teaching schedules, classroom space, and student interest are only a few of the considerations when the high school master schedule is built. The driving force behind this process is the information students submit on their course preference forms. Teachers and counselors are available to advise students on finding the best fit and balance. *The completed form should represent a student's thoughtful and informed choices*.

Students must understand that limited movement is permitted in their schedules after they have submitted their course preference forms to their counselor. Students and parents may not request to have specific teachers or classes with friends. All course requests are final unless the placement is clearly inappropriate or there is a conflict with another course. In this case, counselors will contact students and advise them on other course options.

Requests to add, delete, or change a course must be made to the student's counselor before the end of the first ten days of the semester. Students must complete a *Schedule Change Request form* that can be picked up at the counselors' office. All efforts will be made to schedule students with their preferred courses, if however there is a conflict or a course is already filled, counselors will contact students and advise them of their other course options.

If a students wants to make a schedule change:

1. Student completes the Schedule Change Request form.
2. Student completes the rationale section of the form (specifying educationally sound reasons) and schedules an appointment to see his/her counselor to review and discuss the request.

It is important to note that receiving approval for schedule changes after the first ten days of school becomes more difficult and carries different consequences as a result.

Please note:

- *WP (Withdraw Passing) and *WF (Withdraw Failing) grades are not included in the calculations of GPA nor is credit granted.
- Only in exceptional cases (e.g., hospitalization, recommendation from the High School Support Team) and with approval from the high school principal is a student allowed to withdraw from a course beyond Quarter 1 with a WP or WF*.
- When a student transfers to a new class, the grade from the dropped class does not carry forward into the added class.

- Grade 10 - Students can take a maximum of 2 AP courses in 10th grade. If a student requests more, they will need to undergo a rigorous override process.
- Grades 11 and 12 - Students can take a maximum of 3 AP courses per year in 11th and 12th grade. If a student requests more, they will need to undergo an override process.
- Students who wish to take a course they are not recommended for need to seek additional approval.

Shanghai American School inspires in all students:
上海美国学校激励并培养所有的学生:

A lifelong passion for learning
终身学习的热情

A commitment to act with integrity and compassion
诚信与仁爱的信念

The courage to live their dreams.
追求梦想的勇气 。

SHANGHAI AMERICAN SCHOOL

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Thanks to our high school students and teachers for letting their photos and artworks be displayed in this book.