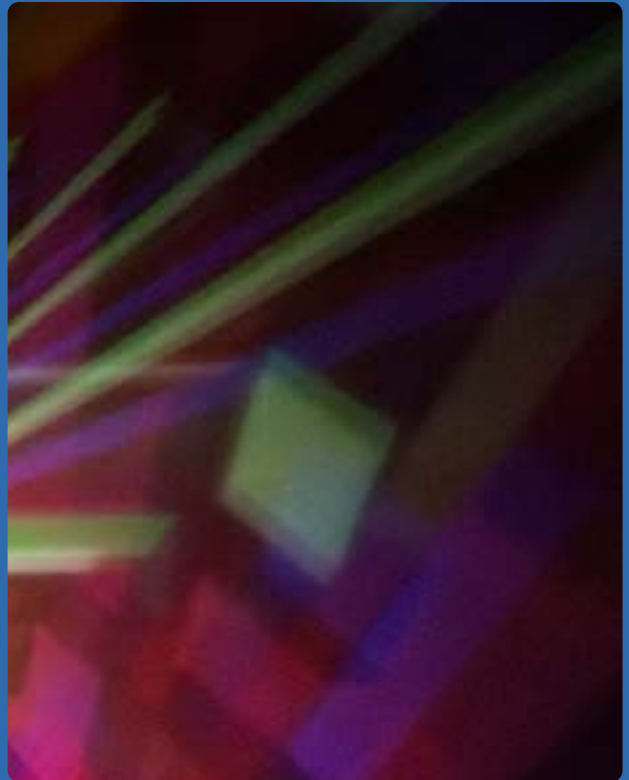


# HIGH SCHOOL COURSE CATALOG

2024-2025



SHANGHAI  
AMERICAN  
SCHOOL

PUXI

Art by Michelle Dai '26



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# CONTENTS

- Schoolwide Transfer Goals ..... 2
- School Mission, Core Values, “Best Fit” Philosophy, and  
Graduation Requirements ..... 3
- IB Program ..... 4
- Advanced Placement and AP Capstone Program ..... 6
- Innovation Institute ..... 9
- Master Course List ..... 10
- English Courses ..... 13
- Mathematics Courses ..... 16
- Social Studies Courses ..... 20
- Science Courses ..... 25
- Global Languages Courses ..... 29
- Chinese Language Courses ..... 33
- Visual Arts Courses ..... 38
- Performing Arts Courses ..... 41
- Applied Arts Courses ..... 44
- Physical and Health Education Courses ..... 46
- Electives ..... 49
- Learning Support ..... 52
- English as an Additional Language (EAL)..... 52
- Online Learning  
(Pamoja Online IB Classes and VHS and GOA Classes) ..... 53

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.

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 3 IB HL or 3 AP courses in grades 11 and 12. The most rigorous SAS academic program is defined as 7 AP and/or IB HL credits over a student’s high school career.

## 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.

## SAS CORE VALUES

We believe that:

- Embracing diversity enriches individuals and communities
- Acts of compassion and generosity of spirit create a better world
- When individuals take responsibility for their own decisions, they are empowered to make positive impact
- Each individual has intrinsic value and the potential to contribute to society
- Collaboration is key to overcoming complex challenges and achieving common goals
- Integrity is the foundation of enduring relationships, quality institutions and well-functioning communities
- As global citizens we have a duty to care for the earth and its inhabitants to ensure the well-being of humankind
- Creativity, critical thinking, and a lifelong passion for learning are essential to personal fulfillment and to meet the challenges of the future.

## 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
- Fine, Performing or Applied Arts 2.0 credits
- Foreign Language 2.0 credits (2 years of the same language)
- Physical Education/Health 2.0 credits
- Electives 5.0 credits





# The International Baccalaureate (IB) Diploma Program

The International Baccalaureate Diploma Program is a rigorous preuniversity 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.

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.



## IB Diploma Subject Requirements

Diploma candidates are required to select one subject from each of the six subject groups, although they can choose a second subject from groups 1 to 4 instead of a creative arts 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.

## Additional IB Diploma Requirements

The program offers special features in addition to the six subjects of the curriculum that are central to the 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 bi-

ases, 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)

The Creativity, Activity, Service (CAS) program involves students in experiential learning through a range of artistic, physical and service activities. It enables students to demonstrate attributes of the IB learner profile in real and practical ways, to grow as unique individuals and to recognize their role in relation to others. Students develop skills, attitudes and dispositions through a variety of individual and group experiences that provide opportunities to explore their interests and express their passions, personalities and perspectives. CAS complements a challenging academic program in a holistic way, providing opportunities for self-determination, collaboration, accomplishment and enjoyment.

## Learner Profile

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



## Examination Information

Students who register for IB courses must sit for the external exams in May. The registration fees and costs of the exams are the responsibility of the family.

## IB Course Offerings 2023-24

IB Diploma candidates choose:

- 3 HL courses and 3 SL courses
- 1 course from each of the 6 groups, plus Theory of Knowledge (TOK)
- A second course from Groups 1-4 may be substituted for a course in Group 6.



- Group 1**
- English A: literature HL/SL
  - English A: language & literature HL/SL
  - Chinese A: language & literature HL/SL
  - Self-taught Language A: literature SL

- Group 2**
- Mandarin B HL/SL
  - Mandarin ab initio SL
  - French B HL/SL
  - French ab initio SL
  - Spanish B HL/SL
  - Spanish ab initio SL

- Group 3**
- Economics HL/SL
  - History HL/SL
  - Psychology HL/SL
  - Environmental systems & societies SL+HL (can count as group 3 or 4 or as both 3 & 4)
  - Philosophy SL\*
  - Business and Management SL/HL\*
  - Global Politics SL/HL

- Group 4**
- Biology HL/SL
  - Chemistry HL/SL
  - Physics HL/SL
  - Environmental Systems & Societies SL+HL (can count as group 3 or 4 or as both 3 & 4)
  - Sports, Exercise & Health Science SL/HL
  - Computer Science HL/SL



- Group 6**
- Music SL/HL
  - Theatre SL/HL
  - Visual Arts SL/HL
  - Film SL/HL
  - Dance SL/HL

- Group 5**
- Math: Analysis and Approaches SL and HL
  - Math: Applications and Interpretation SL and HL

\* These courses will be taught through Pamoja, an on-line provider. Contact Mr. Gines Bernal if you have any questions. gines.bernal@saschina.org



## The Advanced Placement (AP) Program

The Advanced Placement (AP) Program is a challenging academic program designed to provide motivated high school students with college-level academic courses.

Established in 1955 by the College Board, the AP Program is considered a standard for academic excellence in the United States. AP courses with qualifying exam grades are accepted for credit, advanced placement or both, by most American colleges and universities.

In addition, AP courses and exam grades are used in the admissions process in more than 400 universities outside of the United States. Students enrolled in an AP course at SAS are required to take the AP exam in May.

### 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 new, 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. Students may enroll in this class either grade 10 or grade 11.

#### The AP Capstone Diploma or AP Capstone Certificate

Students successfully completing the AP Seminar, AP Research, and four or more AP classes and exams will receive the AP Capstone Diploma. Students successfully completing the AP Seminar and AP Research Exams will receive the AP Capstone Certificate.

#### Examination Information

Students who register for AP courses must sit for the external exams in May. The registration fees and costs of the exams are the responsibility of the family.

AP University recognition link:  
<http://international.collegeboard.org/programs/ap-recognition>



By: Victoria Yu

### 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.

#### AP SEMINAR (Year 1)

Team Project & Presentation

Research-based Essay & Presentation

Written Exam

#### AP RESEARCH (Year 2)

Academic Thesis

Public Presentation and Defense

#### 4 AP COURSES (Throughout High School)

AP EXAM 1

AP EXAM 2

AP EXAM 3

AP EXAM 4

<http://media.collegeboard.com/digitalServices/pdf/ap/ap-capstone-brochure.pdf>  
 For more information, please visit [collegeboard.org/apcapstone](http://collegeboard.org/apcapstone)



By: Victoria Yu



### AP Capstone Program Year One: AP Seminar

This foundational course, available to grade 10, 11 and 12 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.

Teachers have the flexibility to choose appropriate themes that allow for deep exploration based on student interests, local and/or civic issues, global or international topics, and concepts from other AP courses.

#### Sample Topics or Themes:

- Education
- Innovation
- Sustainability
- Technology
- Revolution

**Assessment:** During the course, students will be assessed on:

- A team project
- An individual paper and presentation
- A written final exam
- The AP Seminar Exam will be based on all three components and be reported on the standard 1-5 AP scoring scale.

### AP Capstone Program Year Two: AP Research

The second course in the AP Capstone experience, available to grade 11 and 12, allows students to design, plan, and conduct a yearlong research-based investigation on a topic of individual interest. Through this inquiry and investigation, students demonstrate the ability to apply scholarly understanding to real-world problems and issues.

Students further the skills acquired in their AP Seminar course by using research methodology; employing ethical research practices; and accessing, analyzing, and synthesizing information to build, present, and defend an argument.

**Assessment:** Students are assessed through culminating performance tasks:

- Academic thesis paper (approximately 5,000 words) with a defined structure.
- Public presentation, performance, or exhibition and oral defense of research and presentation.
- The AP Research Exam score will be based on the paper, presentation, and defense and will be reported on a 1-5 AP scoring scale.

### AP Capstone Diploma

Students earning passing scores in the seminar course and on the research project, as well as scores of 3 or higher on a minimum of four additional AP Exams, will receive the AP Capstone Diploma, demonstrating their proficiency in college-level subject knowledge, as well as research, communication and collaborative skills.



By: Grace Sun

## 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.

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 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 four of their seven courses in the Institute. These courses are noted below:

#### GRADE 10

English 10  
AP Seminar  
Biology Lab Science  
Innovation & Design

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 Ms. Maia Dean | [Maia.Dean@saschina.org](mailto:Maia.Dean@saschina.org).



By: Grace Sun

# MASTER COURSE LIST

## ENGLISH page 13

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
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: Lang. & Lit. SL Y1-Y2	HS1111 HS1121	2	11 12
IB English A: Lang. & Lit. HL Y1-Y2	HS1131 HS1141	2	11 12
AP English Lang. & Composition	HS1200	1	11,12
AP English Lit. & Composition	HS1201	1	11,12

## MATHEMATICS page 16

Course	Course Codes	Credits	Grades
Integrated Math 1 (IM1)	HS3203	1	9
Integrated Math 2 (IM2)	HS3205	1	9,10,11
Integrated Math 3 (IM3)	HS3207	1	10,11,12
Integrated Math 3 Plus (IM3+)	HS3208	1	10,11,12
Pre-Calculus	HS3011	1	11,12
AP Pre-Calculus	HS3003	1	10,11
Calculus	HS3006	1	10,11,12
IB Mathematics Application and Interpretation SL Y1-Y2	HS3113 HS3123	1	11,12
IB Mathematics Application and Interpretation HL Y1-Y2	HS3133 HS3143	1	11,12
IB Mathematics Analysis and Approaches SL Y1-Y2	HS3114 HS3124	1	11,12
IB Mathematics Analysis and Approaches HL Y1-Y2	HS3134 HS3144	1	11,12
AP Advanced PreCalculus	HS3102	1	11,12
AP Calculus AB	HS3200	1	11,12
AP Calculus BC	HS3201	1	11,12
AP Statistics	HS3202	1	11,12
Multivariable Calculus & Series	HS3204	1	12

## SOCIAL STUDIES page 20

Course	Course Codes	Credits	Grades
Asian History	HS2000	1	9
US History	HS2002	1	10
Sociology	HS2009	1	11,12
Applied Economics & Business	HS2018	1	11,12
IB History SL Y1-Y2	HS2111 HS2121	2	11 12
IB History HL Y1-Y2	HS2131 HS2141	2	11 12
IB Philosophy SL Y1-Y2 *	HS2145 HS2146	2	11 12
IB Environmental Systems & Society SL Y1-Y2	HS4115 HS4125	1 Science 1 S.S.	11 12
IB Environmental Systems & Society HL Y1	HS4115 HS4125	1 Science 1 S.S.	11 12
IB Psychology SL Y1-Y2	HS2113 HS2123	2	11 12
IB Psychology HL Y1-Y2	HS2133 HS2143	2	11 12
IB Economics SL Y1-Y2	HS2114 HS2124	2	11 12
IB Economics HL Y1-Y2	HS2134 HS2144	2	11 12
IB Global Politics SL	HS2153	1	11,12
IB Global Politics HL	HS2163	1	11,12
IB Business & Management SL Y1-Y2 *	HS2117 HS2127	2	11 12
IB Business & Management HL Y1-Y2 *	HS2137 HS2147	2	11 12
AP Seminar	HS2208	1	10,11
AP European History	HS2201	1	11,12
AP US History	HS2202	1	11,12
AP World History: Modern	HS2206	1	10,11,12
AP Psychology	HS2203	1	11,12
AP Microeconomics	HS2209	1	11,12
AP Macroeconomics	HS2210	1	11,12
AP Comparative Government & Politics	HS2205	1	11,12

\* These courses will be taught online through Pamoja (see page 52 for more details).

## SCIENCE page 25

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
IB Environmental Systems & Society SL Y1-Y2	HS4115 HS4125	1 Science 1 S.S.	11 12
IB Environmental Systems & Society HL Y1	HS4115 HS4125	1 Science 1 S.S.	11 12
IB Sports, Exercise & Health Science SL Y1-Y2	HS7030 HS7031	1 Science 1 Elective	11 12
IB Sports, Exercise & Health Science HL Y1-Y2	HS7050 HS7051	1 Science 1 Elective	11 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 Physics SL Y1-Y2	HS4112 HS4122	2	11 12
IB Physics HL Y1-Y2	HS4132 HS4142	2	11 12
AP Biology	HS4200	1	11,12
AP Chemistry	HS4201	1	11,12
AP Physics 1	HS4210	1	11,12
AP Physics C: Mechanics	HS4208	1	11,12
AP Physics C: Electricity & Magnetism	HS4209	1	11,12



By: Mandy Wang

## GLOBAL LANGUAGES page 29

Course	Course Codes	Credits	Grades
Accelerated Beginner French	HS5054	1	9,10,11,12
Intermediate French	HS5055	1	10,11,12
Intermediate Low French	HS5056	1	9,10,11,12
Intermediate High French	HS5057	1	10,11,12
IB French B SL Y1-Y2	HS5110 HS5120	2	11 12
IB French B HL Y1-Y2	HS5130 HS5140	2	11 12
IB French <i>Ab Initio</i> SL Y1-Y2	HS5151 HS5152	2	11 12
Accelerated Beginner Spanish	HS5058	1	9,10,11,12
Intermediate Spanish	HS5059	1	10,11,12
Intermediate Low Spanish	HS5060	1	9,10,11,12
Intermediate High Spanish	HS5061	1	10,11,12
IB Spanish B SL Y1-Y2	HS5111 HS5121	2	11 12
IB Spanish B HL Y1-Y2	HS5131 HS5141	2	11 12
IB Spanish <i>Ab Initio</i> SL Y1-Y2	HS5155 HS5156	2	11 12
IB Self-Taught Language A1 SL Y1-Y2	HS5102 HS5103	2	11 12

## CHINESE LANGUAGE page 33

Course	Course Codes	Credits	Grades
Novice Chinese	HS5024	1	9,10,11,12
Intermediate Low	HS5025	1	9,10,11,12
Intermediate Mid	HS5026	1	9,10,11,12
Intermediate High	HS3033	1	9,10,11,12
Advanced Low	HS5031	1	9,10,11,12
Advanced Mid	HS5032	1	9,10,11,12
Advanced High	HS3034	1	9,10,11,12
Superior	HS5147	1	9,10,11,12
IB Mandarin <i>Ab Initio</i> SL	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



VISUAL ARTS <span style="float: right;">page 38</span>			
Course	Course Codes	Credits	Grades
Art Lab	HS6064	1	9,10,11,12
Art Coded	HS6065	1	9,10,11,12
Innovation & Design**	HS6051	1	10
Intermediate Art Studio	HS6207	1	10,11,12
Advanced Art Studio	HS6208	1	11,12
IB Visual Art SL Y1-Y2	HS6110 HS6120	2	11 12
IB Visual Art HL Y1-Y2	HS6130 HS6140	2	11 12
IB Film SL Y1-Y2	HS8165 HS8175	2	11 12
IB Film HL Y1-Y2	HS8185 HS8195	2	11 12

\*\* For the Grade 10 Innovation Institute students only.

PERFORMING ARTS <span style="float: right;">page 41</span>			
Course	Course Codes	Credits	Grades
Concert Choir 1	HS6020	1	9,10,11,12
Concert Choir 2	HS6021	1	9,10,11,12
Concert Band 1	HS6022	1	9,10,11,12
Concert Band 2	HS6023	1	9,10,11,12
Orchestra 1	HS6024	1	9,10,11,12
Orchestra 2	HS6025	1	9,10,11,12
Music Theory, Composition and Technology	HS7105	1	9,10,11,12
Guitar 1	HS6026	1	9,10,11,12
Guitar 2	HS6027	1	9,10,11,12
IB Music SL Y1-Y2	HS6111 HS6121	2	11,12
IB Music HL Y1-Y2	HS6131 HS6141	2	11,12
Introduction to Theatre	HS6029	1	9,10,11,12
Advanced Theatre	HS6030	1	9,10,11,12
Audio Production	HS6034A (S1) HS6034B (S2)	0.5	10,11,12
Dance 1-2	HS7010	0.5-1	9,10,11,12
IB Dance SL Y1-Y2	HS7013 HS7023	1	9,10,11,12
IB Dance HL Y1-Y2	HS7023 HS7043	1	9,10,11,12
IB Theatre SL Y1-Y2	HS6112 HS6122	2	11 12
IB Theatre HL Y1-Y2	HS6132 HS6142	2	11 12

APPLIED ARTS <span style="float: right;">page 44</span>			
Course	Course Codes	Credits	Grades
Intro to Physical Computing	HS7018	1	9,10,11,12
Advanced Physical Computing	HS7028	1	9,10,11,12
Introduction to Robotics	HS8011	1	9,10,11,12
Web Design & Virtual Reality	HS8009	1	9,10,11,12
Game Design and Development	HS8403	1	9,10,11,12

PHYSICAL & HEALTH EDUCATION <span style="float: right;">page 46</span>			
Course	Course Codes	Credits	Grades
Physical & Health Education 1	HS7000	1	9
Physical & Health Education 2	HS7001	1	10
PE 3 – Personal Fitness	HS7002	0.5	11,12
PE 3 – Swimming & Water Safety Instructor	HS7006	0.5	11,12
PE 3 – Lifeguarding	HS7007	0.5	11,12

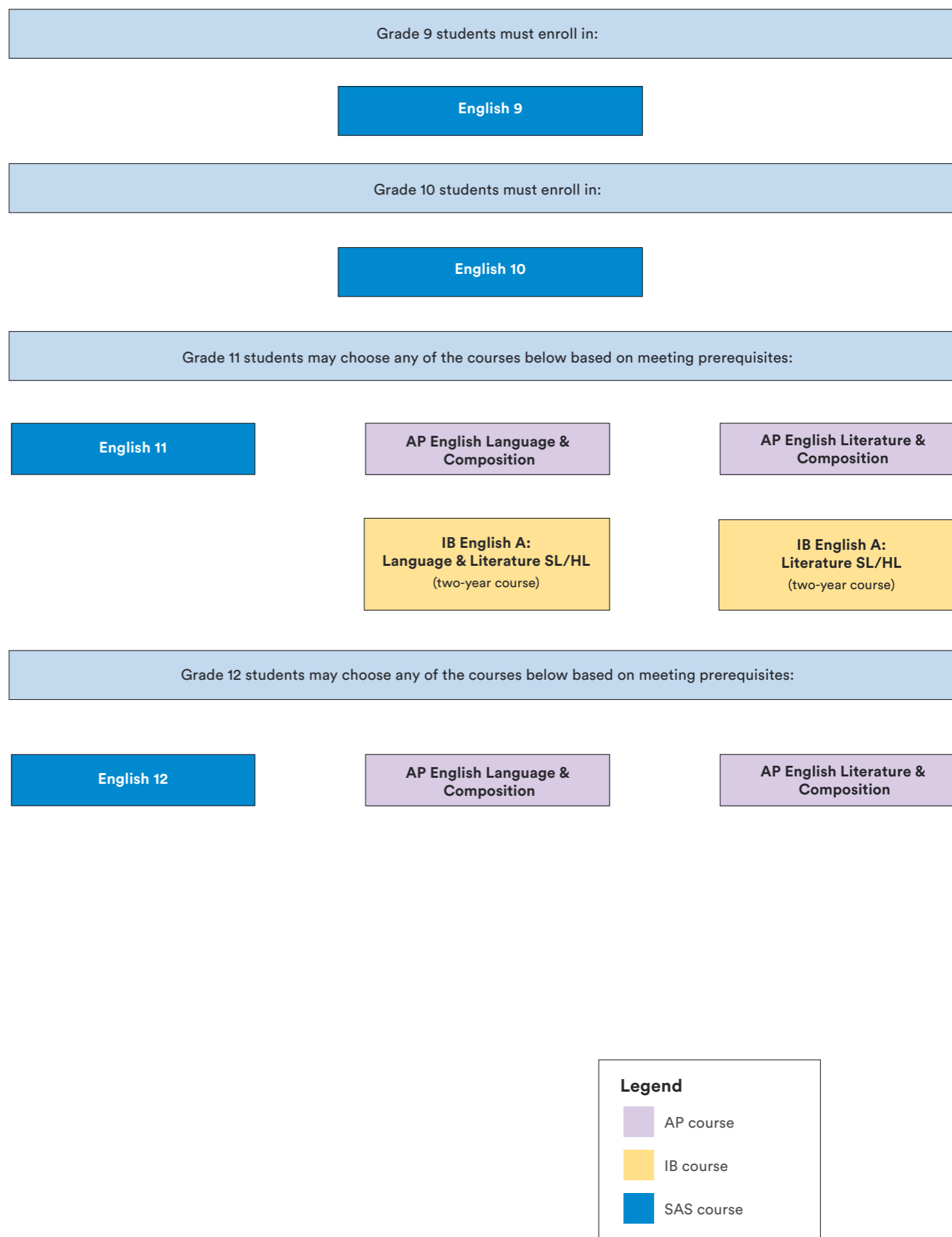
ELECTIVE COURSES <span style="float: right;">page 49</span>			
Course	Course Code	Credits	Grades
Theory of Knowledge Y1-Y2	HS8101 HS8102	1	11 12
AP Research	HS8400	1	11,12
AP Computer Science Principles: Gaming in Python	HS4135	1	11,12
AP Computer Science Principles: Cyber Security in Python	HS4145	1	11,12
AP Computer Science A	HS8201	1	11,12
IB Computer Science SL Y1-Y2	HS8115 HS8125	2	11,12
IB Computer Science HL Y1-Y2	HS8135 HS8145	2	11,12
IB Sports, Exercise, & Health Science SL/HL Y1-Y2	HS7050 HS7051	1 Science 1 Elective	11 12

LEARNING SUPPORT <span style="float: right;">page 52</span>			
Course	Course Code	Credits	Grades
Learning Support	HS8901	0	9,10,11,12

ONLINE LEARNING <span style="float: right;">page 53</span>			
Course	Course Codes	Credits	Grades
Pamoja Education	HS0	TBD	11,12
Virtual High School	HS9100	TBD	11,12
Global Online Academy	HS9103	TBD	11,12

## ENGLISH COURSES

### English Department Flow Chart



**Legend**

- AP course
- IB course
- SAS course



**English 9**

Course Code: HS1000  
Duration: Year  
Prerequisites: None  
Credits: 1.0

In this course, students analyze a wide range of literature that is connected to a variety of different cultures. Students study the following genres: novel, short story, poetry, drama, and nonfiction. The literature serves not only as a vehicle for understanding human experience more richly but also as a means for developing critical thinking, language, and communication skills. Students learn the tools of literary analysis and explore a variety of writing styles and forms. Oral communication skills are developed through participation in seminars, discussions, and oral/dramatic presentations.

**English 10**

Course Code: HS1001  
Duration: Year  
Prerequisites: English 9  
Credits: 1.0

In this course, students study a range of historical and contemporary literature, exploring a variety of genres students are encouraged to make connections between the literature and their experiences as multicultural students. The writing process is used to allow students to explore a variety of writing styles and forms. Students' oral communication skills are developed through participation in seminars, discussions, and oral/dramatic presentations.

**English 11**

Course Code: HS1002  
Duration: Year  
Prerequisites: English 10  
Credit: 1.0

This course is an opportunity for students to continue a deeper exploration of various literary genres and to develop the skills of close reading and literary analysis, as well as both written and oral expression. Through the study of a variety of genres, students are encouraged to connect aspects of the texts they read with their own personal knowledge and experience. Students will be expected to produce a variety of assessments such as written essays, oral presentations, creative pieces, and visual projects.

**English 12**

Course Code: HS1003  
Duration: Year  
Prerequisites: English 11 or AP Language  
Credit: 1.0

In this course students will develop their understanding of others and the worlds in which they live through the study of classic and contemporary literature. The course is focused on developing student skills in reading, analysis, written expression, speaking and listening. Students will be expected to read critically, comprehend, and respond to the works through class discussions and written assignments. A variety of assessment types will be used to develop skills including oral presentations, written essays, and a research paper or project.

**IB English A: Literature SL/HL**

Course Codes: HS1110 (SL Y1); HS 1120 (SL Y2); HS1130 (HL Y1); HS1140 (HL Y2)  
Duration: Two years  
Prerequisites: English 10  
Credits: 2.0

This course is designed for students interested in developing their analytical skills through the study of literary texts. The areas of exploration in the course include:

- Readers, writer and texts – exploring the nature and purpose of literature and the ways in which texts can be read, interpreted and responded to
- Time and Space – draws attention to the fact that texts are not isolated entities, but are connected to space and time
- Intertextuality: connecting texts – focuses on the connections between and among diverse texts, traditions, creators and ideas

Each of these is accompanied by six questions, linked to course concepts, that provide a guide to the learning in each part of the course.

The emphasis of the course will be on developing the skills of independent literary analysis, critical reading and the powers of expression in both written and oral communication through the study of literature in a variety of media and modes, from different periods, styles, genres and cultures.

Written compositions, exams, and oral commentary will be assessed through internal (school) and external (IBO) assessments. At Standard Level students read 9 texts, some in translation, in order to complete the IB assessment tasks.

At Higher Level a greater depth of material is covered and students read 13 texts, some in translation, in order to complete the IB assessment tasks.

The internal assessment task for HL is more demanding than that of SL, requiring more texts to be used and a longer presentation. There is also an additional essay HL students will complete. In addition, the external assessment criteria require the HL students to show a deeper understanding of content, complete a more in-depth task and show a greater ability to analyze a writer's techniques than SL students.



By: Sara Kaste

**IB English A: Language & Literature SL/HL**

Course Codes: HS1111 (SL Y1); HS 1121 (SL Y2); HS1131 (HL Y1); HS1141 (HL Y2)  
Duration: Two years  
Prerequisites: English 10  
Credits: 2.0

The Language and Literature course is designed to encourage students to question the meaning generated by language and texts. Students will develop their analytical skills through the study of literary texts, nontraditional texts and topics dealing with language in cultural contexts, and language in mass communication.

Areas of exploration in the course include::

- Readers, writer and texts – exploring the nature and purpose of literature and the ways in which texts can be read, interpreted and responded to
- Time and Space – draws attention to the fact that texts are not isolated entities, but are connected to space and time
- Intertextuality: connecting texts – focuses on the connections between and among diverse texts, traditions, creators and ideas

Each of these is accompanied by six questions, linked to course concepts, that provide a guide to the learning in each part of the course.

The emphasis of the course will be on developing the skills of independent textual analysis, critical reading and the powers of expression in both written and oral communication through the study of language and literature in a variety of media and modes, from different periods, styles, genres and cultures.

Written compositions, exams, and oral commentary will be assessed through internal (school) and external (IBO) assessments.

All students are expected to read a breadth of non-literary texts.

In addition:

Standard Level students read four texts, some in translation, in order to complete the IB assessment tasks.

At Higher Level, a greater depth of material is covered and students read six texts, some in translation, in order to complete the IB assessment tasks.

The internal assessment task for HL is more demanding than that of SL, requiring more texts to be used and a longer presentation. There is also an additional essay HL students will complete. In addition, the external assessment criteria require the HL students to show a deeper understanding of content, write comparatively, complete more in-depth tasks and show a greater ability to analyze a writer's techniques than SL students.

**AP English Language & Composition**

Course Code: HS1200  
Duration: Year  
Prerequisites: English 10  
Credits: 1.0

The main goal of AP English Language and Composition is to develop the high-level skills students will need to read and write effectively in their college courses and in their personal and professional lives. Students will read and write many different kinds of essays: argumentative, expository, analytical, personal, and creative. Students signing up for AP English Language need to have the basic skills necessary to handle a high-level composition course. In addition, a high degree of responsibility for class participation and independent learning is expected from students. All students enrolled in an AP subject must sit the external exam at the end of the school year.

**AP English Literature & Composition**

Course Code: HS1201  
Duration: Year  
Prerequisites: English 10  
Credits: 1.0

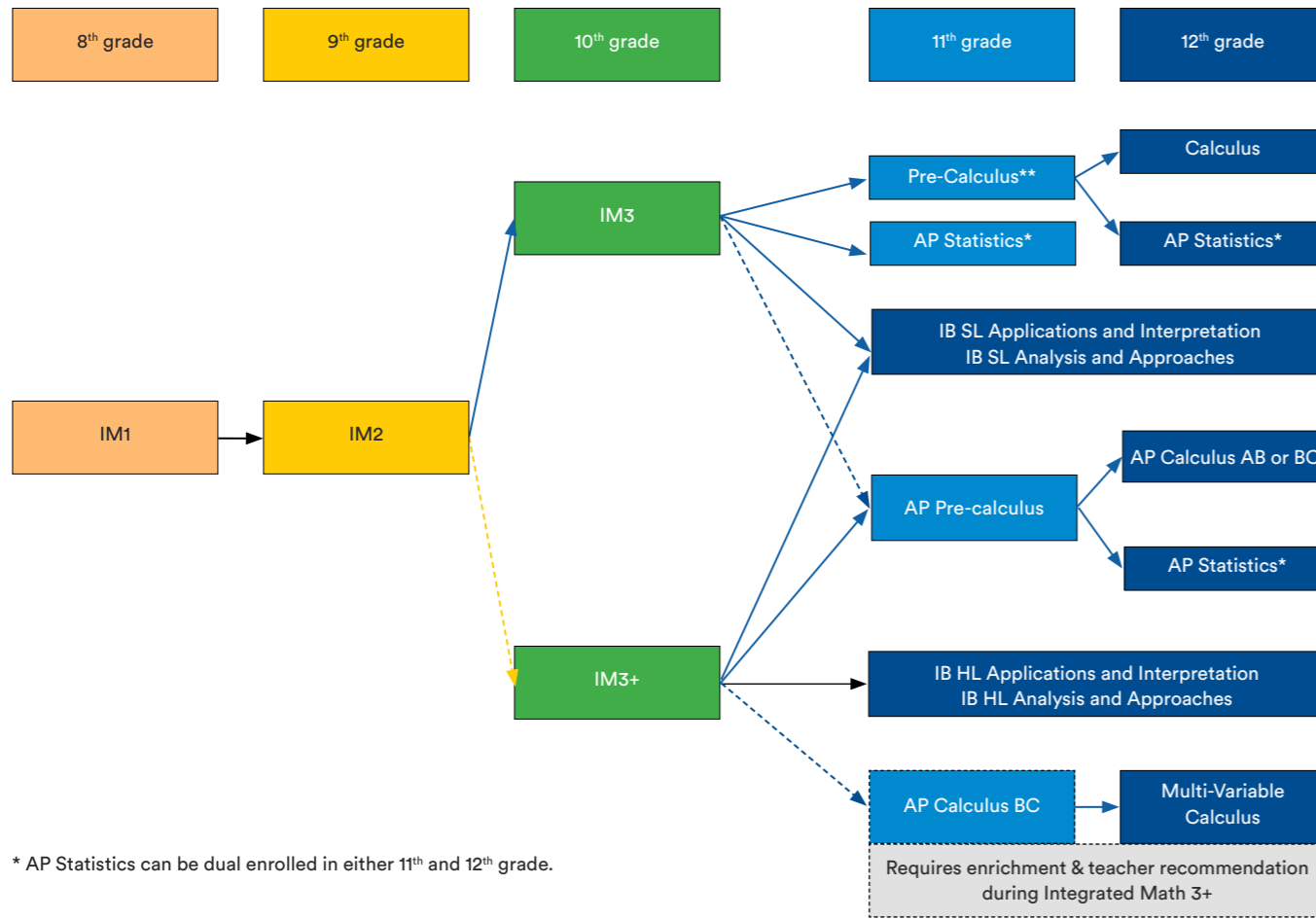
The AP English Literature and Composition course will engage students in the careful reading and critical analysis of imaginative literature. Through the close reading of selected texts, students will deepen their understanding of the ways writers use language to provide meaning and pleasure as well as such smaller scale elements as the use of figurative language, imagery, symbolism, and tone. The course will include intensive study of representative works from various genres and periods, concentrating on works of recognized literary merit. In addition to considering a work's literary artistry, the students will confront the author's explicit or implicit teaching about life. Writing will be an integral part of the AP English Literature and Composition course, focusing on the critical analysis of literature and will include expository, analytical, and argumentative essays. All students enrolled in an AP subject must sit the external exam at the end of the school year.



By: Mandy Wang

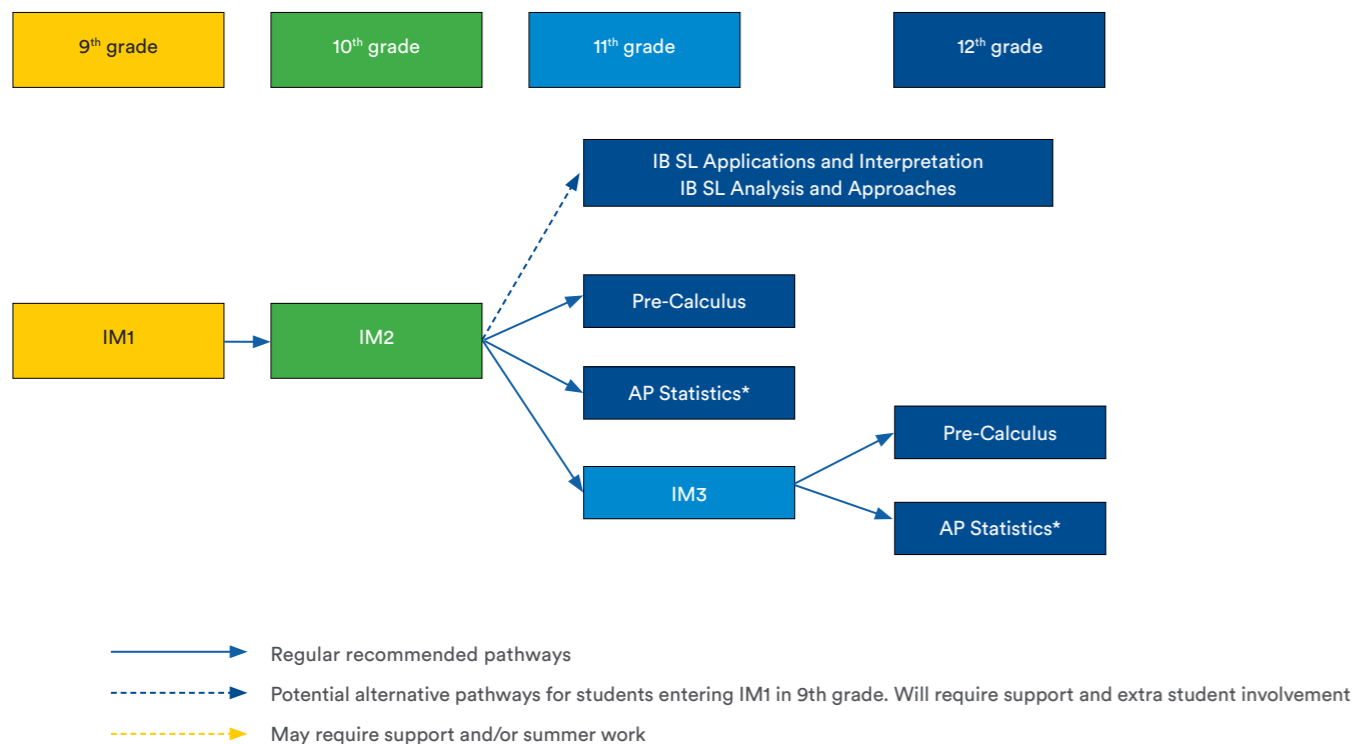
**MATHEMATICS COURSES**

Mathematics Department Flow Chart



\* AP Statistics can be dual enrolled in either 11<sup>th</sup> and 12<sup>th</sup> grade.

Students entering IM1 in 9th grade



**Integrated Math 1 (IM1)**

Course Code: HS3203  
Duration: Year  
Prerequisites: Pre-Algebra equivalent  
Credits: 1.0

Integrated Mathematics 1 is the first of a three-course sequence based on Common Core State Standards. Integrated Math I topics include recognizing and developing patterns using tables, graphs, and equations. Mathematical modeling is stressed as a methodology for approaching the solution to problems. Students will explore operations on algebraic expressions and apply mathematical properties to algebraic equations. Students will problem solve using equations, graphs and tables, and investigate linear relationships, including comparing and contrasting options and decision-making using algebraic models. Reinforcement of topics from two-dimensional Geometry is integrated into this curriculum. This includes applications from the areas of perimeter and area, the Pythagorean Theorem and its applications, as well as geometric proportion. Technology will be used to introduce and expand upon the areas of study listed above. This course requires students to have a TI-Nspire calculator (Non-CAS version).

**Integrated Math 2 (IM2)**

Course Code: HS3205  
Duration: Year  
Prerequisites: Integrated Math 1  
Credits: 1.0

Integrated Math 2 is the second course of the Integrated Mathematics progression based on Common Core State Standards. This course continues to explore functions through different representations of quadratic, exponential, trigonometric and other relationships while connecting the ideas and algebra of irrational numbers. An introduction to proofs includes but is not limited to trigonometric ratios, similarity and circle theorems. Basic elementary probability focuses on the ideas of compound events and conditional probability, as well as the use of probability to evaluate outcomes of decisions. Additional topics include right triangle trigonometry and using data to build models. A main focus of this course is the application of main ideas in new and different contextual situations. This course requires students to have a TI-Nspire calculator (Non-CAS version).

**Integrated Math 3 (IM3)**

Course Code: HS3207  
Duration: Year  
Prerequisites: Integrated Math 2  
Credits: 1.0

Integrated Math 3 is the third course of the Integrated Mathematics progression based on Common Core State Standards. This course continues to explore functions through different representations of polynomial, exponential and trigonometric relationships. Emphasis will be placed on applying trigonometric concepts to general triangles, the unit circle, trigonometric equations and identities. Additional topics include statistics and probability with emphasis on statistical inference and using data for mathematical modeling. A focus of this course is the application of the main ideas in new and different contextual situations. This course requires students to have a TI-Nspire calculator (Non-CAS version).

**Integrated Math 3 Plus (IM3+)**

Course Code: HS3208  
Duration: Year  
Prerequisites: Integrated Math 2  
Credits: 1.0

Integrated Math 3 Plus is the third course of the Integrated Mathematics progression based on Common Core State Standards, but the content of the regular Integrated Math 3 course will be explored at a deeper level and the course also covers additional content. This course continues to explore functions through different representations of polynomial, rational, radical, exponential and trigonometric relationships. Emphasis will be placed on applying trigonometric concepts to general triangles, the unit circle, trigonometric equations, and identities. Additional topics include statistics and probability with emphasis on statistical inference and using data for mathematical modeling. The main focus of this course is the application of main ideas in new and different contextual situations.

In addition, this course contains advanced functional analysis advanced trigonometric modeling, and complex number algebra. This course requires students to have a TI-Nspire calculator (Non-CAS version).

**Pre-Calculus**

Course Code: HS3004  
Duration: Year  
Prerequisites: IM3  
Credits: 1.0

The major focus of this course is on functions. Topics covered include relations, functions and their graphs, polynomials, rational functions, exponential and logarithmic functions, right triangle trigonometry, laws of sine/cosine, trigonometric identities, graphing of sine and cosine functions and trigonometric modeling. This course is designed for students with gaps in Algebra and prepares them for Calculus. Students are required to purchase a TI-Nspire calculator (Non-CAS version).

**Calculus**

Course Code: HS3006  
Duration: Year  
Prerequisites: Pre-calculus  
Credits: 1.0

This course explores limits, derivatives of algebraic and transcendental functions, differentiation techniques, related rates, definite integrals, indefinite integrals and anti-differentiation, numerical integration, areas of planar regions, volumes and surface areas of solids of revolution. Students are required to purchase a TI-Nspire calculator (Non-CAS version).



**IB Mathematics: Application and Interpretation SL Y1-Y2**

Course Codes: HS3113 (Y1), HS3123 (Y2)

Duration: Two years

Prerequisites: IM3 or higher. Grade 11-12 only

Credits: 2.0

This course is designed for students whose primary interests lie outside mathematics and the physical sciences. Core topics covered include functions, algorithms, sequences and series, applications involving compound interest, probability, statistics, trigonometry, linear programming, geometry in three dimensions, differential calculus, an introduction to integration, and applications to finance.

Writing a mathematical exploration and working on precise math communication are significant parts of this course. Students are required to purchase a TI-Nspire calculator (Non-CAS version).

**IB Mathematics: Application and Interpretation HL Y1-Y2**

Course Codes: HS3133 (Y1), HS3143 (Y2)

Duration: Two years

Prerequisites: IM3 or higher. Grade 11-12 only

Credits: 2.0

This course is designed for students with a strong background in mathematics. It prepares students for various areas of university studies such as business, medicine, statistics, economics, and others. In addition to the topics described in SL AI, the HL AI course includes logarithms, complex numbers, polar form, matrices, composite functions, and vectors. This course will also explore differentiation, integration, Probability and Statistics to a much greater depth than the SL AI course.

Writing a mathematical exploration and working on precise math communication are significant parts of this course. IB Math HL AI is for students who like challenges and have excellent study habits. Students are required to purchase a TI-Nspire calculator (Non-CAS version).

**IB Mathematics: Analysis and Approaches SL Y1-Y2**

Course Codes: HS3114 (Y1), HS3124(Y2)

Duration: Two years

Prerequisites: IM3/IM3+

Credits: 2.0

This course is designed for students with a sound background in mathematics. It prepares students for various areas of university studies such as mathematics, engineering, physical sciences, economics and others. The topics studied include algebra, functions and equations, circular functions and trigonometry, statistics and probability, differential and integral calculus.

Writing a mathematical exploration and working on precise math communication are significant parts of this course. Students are required to purchase a TI-Nspire calculator (Non-CAS version).

**IB Mathematics: Analysis and Approaches HL Y1-Y2**

Course Codes: HS3134 (Y1), HS3144(Y2)

Duration: Two years

Prerequisites: IM3+

Credits: 2.0

This course is designed for students with a strong background in mathematics and an interest in pursuing university studies in technology, mathematics or the physical sciences. In addition to the topics described in SL AA, the HL AA course includes complex numbers, polar forms, and vectors. This course will also explore functions, differentiation, integration, and statistics to a much greater depth than the SL AA course.

Writing a mathematical exploration and working on precise math communication are significant parts of this course. IB Math HL is for students who like challenges and have excellent study habits. Students are required to purchase a TI-Nspire calculator (Non-CAS version).

**AP Pre-Calculus**

Course Code: HS3012

Duration: Year

Prerequisites: IM3+ or IM3

Credits: 1.0

This course is designed to provide students with the opportunity to prepare for Calculus AB and BC and establish a strong foundation in functions. It covers a range of essential topics, including functions and their properties, polynomial and rational functions, exponential and logarithmic functions, trigonometric functions, conic sections, and sequences and series.

Throughout the course, students will actively develop their problem-solving skills and gain a comprehensive understanding of functions through the analysis of graphs, numerical representations, and equations. The primary goal is to foster a deep conceptual understanding of functions and their dynamic relationships. Students will also learn to construct function models based on data and effectively interpret information with accuracy.

Moreover, this course emphasizes the application of knowledge in real-life contexts, enabling students to connect their learning to practical situations and cultivate critical thinking abilities. By providing a solid foundation, AP Precalculus equips students for future studies in mathematics and related fields, setting them on a path to success. Students are required to purchase a TI-Nspire calculator (Non-CAS version).

**AP Calculus AB**

Course Code: HS3200

Duration: Year

Prerequisites: Pre-Calculus or AP Pre-Calculus

Credits: 1.0

This course explores the major topics required for AP Calculus AB, and is equivalent to the first semester of a traditional college calculus course. Topics include limits, derivatives of algebraic and transcendental functions, differentiation techniques, extremization, related rates, Riemann sums and the definite integral, indefinite integrals and anti-differentiation, numerical integration, areas of planar regions, and volumes and surface area of solids of revolution. Students are required to purchase a TI 84+ calculator. All students enrolled in an AP subject must sit the external exam at the end of the school year. Students are required to purchase a TI-Nspire calculator (Non-CAS version).

**AP Calculus BC**

Course Code: HS3201

Duration: Year

Prerequisites: AP Pre-Calculus or AP Calculus AB

Credits: 1.0

This course offers a highly accelerated and demanding academic experience characterized by a fast-paced and rigorous curriculum. It features an accelerated version of AP Calculus AB, allowing students to cover the BC syllabus within a single year. This course is equivalent to the first two semesters of university-level calculus. The major topics include those listed in AB Calculus and the additional BC-level topics: improper integrals and further applications of integrals, differential equations and Euler's method, L'Hôpital's rule, analysis of planar curves, polynomial approximations, series, parametric, polar, and vector functions. The offering of this course is subject to enrollment. Students are required to purchase a TI-Nspire calculator (Non-CAS version). All students enrolled in an AP subject must sit the external exam at the end of the school year.

**AP Statistics**

Course Code: HS3202

Duration: Year

Prerequisites: Student must be at least grade 11 and have completed IM3 or above.

Credits: 1.0

AP Statistics is a course designed to introduce students to the major concepts necessary for collecting, organizing, analyzing, and interpreting data. The four broad conceptual themes are exploring data, designing a study, anticipating patterns using simulations and probability, and statistical inference. While this course relies on complex math concepts, this is not a traditional

math course. The major emphases are reading, writing, conceptual understanding, interpretation and judgment, analysis, the ability to compare and contrast.

Students are required to have a TI-Nspire calculator (Non-CAS version). All students enrolled in an AP subject must sit the external exam at the end of the school year.

**Multivariable Calculus & Series**

Course Code: HS3204

Duration: Year

Prerequisites: AP Calculus BC

Credits: 1.0

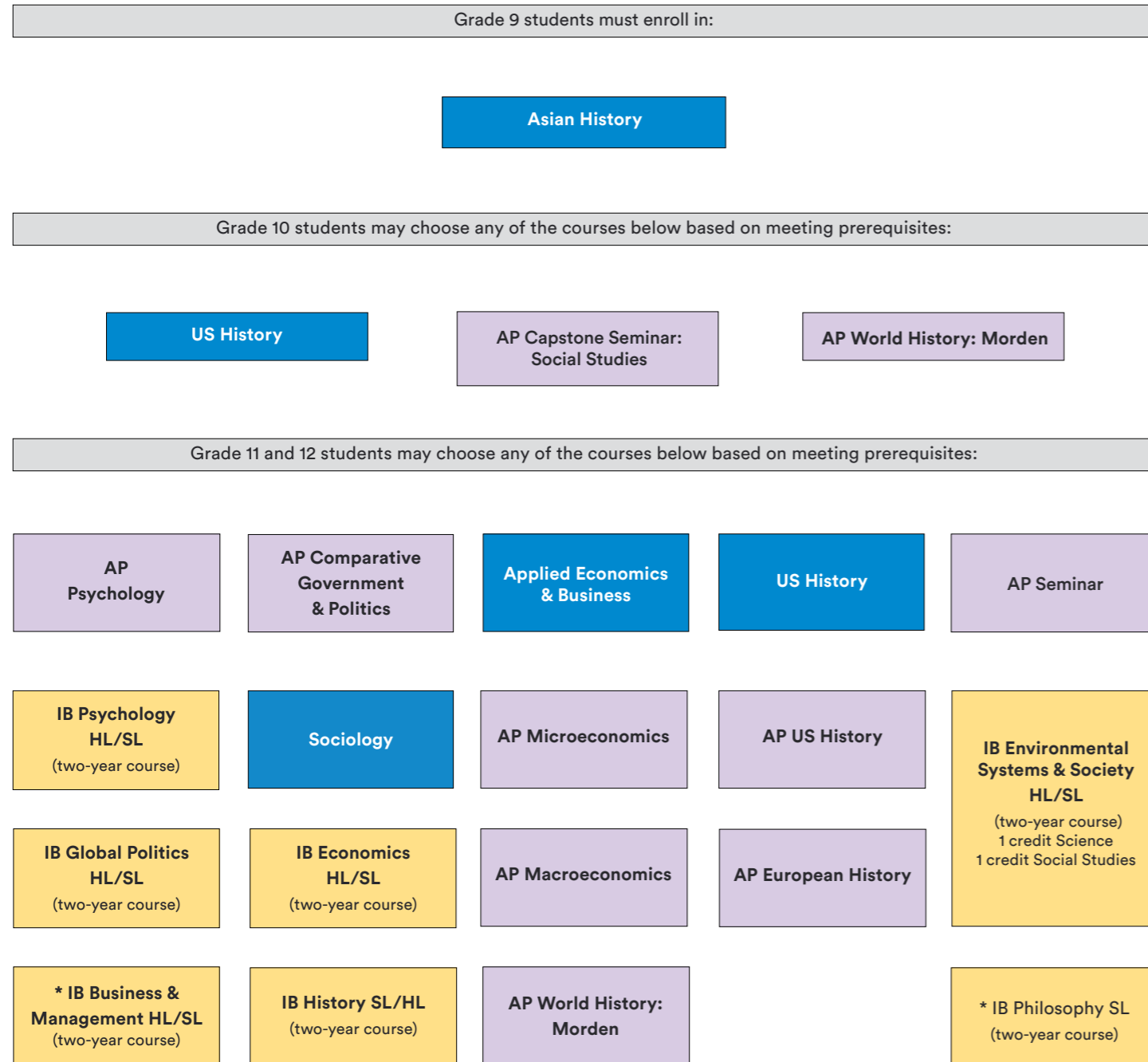
This course is equivalent to a third semester college calculus course. Students investigate the geometry of three-dimensional curves and surfaces, and extend the single-variable concepts of derivatives and integrals to three and more dimensions. The process of finding a minimum or maximum value of a function of several variables is illustrated, and the techniques used to find the volume of a three-dimensional region and the average value of a given function over such a region are explored. Differential and integral calculus of several variables are the focal points of this college-level course which extends the BC Calculus experience to three dimensions, culminating in several calculus applications to physics including Stokes', Green's, and Gauss' Theorems. Students are required to have a TI-Nspire calculator (Non-CAS version).



By: Sara Kaste

**SOCIAL STUDIES COURSES**

**Social Studies Department Flow Chart**



**Legend**

- AP course
- IB course
- SAS course

\* These courses will be taught online through Pamoja.

**Asian History**

Course Code: HS2000  
Duration: Year  
Prerequisites: None  
Credits: 1.0

Asian History fulfills the Grade 9 Social Studies requirement. This is a general survey course designed to better acquaint students with the history of China. More importantly, this is a course designed to enhance students' ability to think critically. Students develop their skills in analyzing primary and secondary sources and developing historical arguments in writing. In developing this skill set, students ultimately seek to answer the question "How do we tell the story of history?"

**US History**

Course Code: HS2002  
Duration: Year  
Prerequisites: Asian History  
Credits: 1.0

U.S. History is a course that will look at major historical events that shaped the identity of the United States. The primary focus of the course is the mid 19th century to the present. The curriculum structure of this course will focus on themes in which students will develop an understanding of the struggles, opportunities, and challenges that have faced America throughout its history. Students will be taught to think critically, develop writing skills, analyze documents and develop historical thinking skills that will prepare them for continued study in the Social Studies area.

**Sociology**

Course Code: HS2009  
Duration: Year  
Prerequisites: Grade 11 or Grade 12  
Credits: 1.0

This year-long course introduces students to the basic tenets of sociology. Students learn about socialization, characteristics of groups, inequality, ethnicity, gender, and social deviance. Students reflect on their own social situations while learning about social theory and thinkers who have influenced the field. There is an emphasis on understanding the self in relation to social forces, patterns and problems.

**Applied Economics & Business**

Course Code: HS2018  
Duration: Year  
Prerequisites: Grade 11 or Grade 12  
Credits: 1.0

The Applied Business and Economics course aims to equip students with a comprehensive understanding of the ideation, research, market analysis, planning, and management processes involved in owning a business. The course is project-based and involves a simulation project where students will develop a professional business plan proposal. This approach fosters leadership, collaboration, problem-solving, and ethical decision-making skills, as well as enhancing public speaking, presentation, social and business etiquette, and critical thinking abilities. The course emphasizes the analysis of business problems the development of business leadership skills, and provides a deeper understanding of the business world through the lens of an entrepreneur. Throughout the course, students will learn about Entrepreneurship basics, transforming ideas into viable businesses, understanding economics and the market, conducting market research and product development, creating effective marketing and advertising plans, designing business strategies and branding, and managing business finances. As a culmination of their learning, students will engage in a year-long project in which they will build their own business. The project will conclude with a Shark Tank-style pitch, in addition to a business sales day in mid-April. Here, the students will have the opportunity to sell their own products or service. This practical experience further reinforces their understanding of business concepts and enhances their entrepreneurial skills.

**IB History SL/HL Y1-Y2**

Course Codes: HS2111 (SL Y1), HS2121 (SI Y2); HS2131 (HL Y1); HS2141 (HL Y2)  
Duration: Two years  
Prerequisites: Grade 11 or Grade 12  
Credits: 2.0

IB History is a modern world history course that focuses on international and domestic conflicts during the 20th century. Students use course content to perform the critical historical thinking skills of analyzing a variety of sources, conducting independent historical research, and writing historical arguments. Students will study the causes, processes, and effects of major and minor wars, including their economic, ideological, political, social, strategic, technological, and territorial aspects. Both SL and HL students will study the causes of the Second World War in Europe and Asia and the resulting global Cold War as major areas of study.

**Higher level coursework:** Students will also learn about regional issues in Asia during the 20th century by studying the colonial, diplomatic, military, and political history of China, Japan, Korea, Vietnam, and other nearby nations.

**IB Philosophy SL Y1-Y2**

Course Codes: HS2145 (Y1), HS2146 (Y2)  
Duration: Two years  
Prerequisites: Full IB Diploma Students  
Credits: 2.0

IB Philosophy is a subject that tackles questions important to humanity. For example, what is it to be a human being and how do I know what is the right thing to do? Students will learn how to think systematically, analyze arguments, and study philosophical themes. They will also be looking at problems facing contemporary society, including those resulting from increased international interaction. IB Philosophy covers major philosophical themes such as moral values, relativism, utilitarianism as well as major philosophical thinkers such as Plato, Socrates, Hegel and Iris Murdoch. Students will also look at questions such as: are human beings special? Are we free and are human beings naturally selfish? They will also get the chance to study an optional theme of your own choice.



This course will be taught online through Pamoja. To full IB Diploma students. For more information visit: <http://www.pamojaeducation.com/IB-online-courses/>



By: Victoria Yu



**IB Environmental Systems & Society SL Y1-Y2 + HL Y1**

Course Codes: HS4115 (Y1), HS4125 (Y2)

Duration: Two years

Prerequisites: Biology Lab Science

Credits: 1.0 Science credit (Y1), 1.0 Social Studies credit (Y2)

The prime intent of this course is to provide students with a coherent perspective of the interrelationships between environmental systems and societies; one that enables them to adopt an informed, personal response to the wide range of pressing environmental issues that they will inevitably come to face. Students' attention can be constantly drawn to their own relationship with their environment and the significance of choices and decisions that they make in their own lives. It is intended that students develop a sound understanding of the interrelationships between environmental systems and societies, rather than a purely journalistic appreciation of environmental issues. Students will be evaluating the scientific, ethical, and socio-political aspects of issues. Field work and other experiential work will be an integral part of the course, some of which may be extended beyond the normal school schedule.

As a trans-disciplinary course, IB Environmental Systems and Society is designed to combine the techniques and knowledge associated with the group 4 (experimental sciences) with those associated with group 3 (individuals and societies). Choosing to study this course as part of the IB diploma program allows students to satisfy the requirement for both groups 3 & 4 of the hexagon. This then allows students to choose another subject from any hexagon group (including another group 3 or 4 subject). At SAS, a student enrolled in the IB Environmental Systems and Society two year course will be awarded a science credit for year 1 and a social studies credit for year 2.

**IB Psychology SL/HL Y1-Y2**

Course Codes: HS2113 (SL Y1), HS2123 (SL Y2); HS2133 (HL Y1); HS2143 (HL Y2)

Duration: Two years

Prerequisites: Grade 11 or Grade 12

Credits: 2.0

IB Psychology examines the interaction of biological, cognitive, and sociocultural influences on human behavior, thereby adopting an integrative approach. Understanding how psychological knowledge is generated, developed and applied enables students to achieve a greater understanding of themselves and appreciate the diversity of human behavior. The ethical concerns raised by the methodology and application of psychological research are key considerations in this course.

IB Psychology takes a holistic approach that fosters intercultural understanding and respect. In the core of the IB Psychology course, the biological level of analysis demonstrates what all humans share, whereas the cognitive analysis reveals the immense diversity of influences that produce human behavior and mental processes. Cultural diversity is explored and students are encouraged to develop empathy for the feelings, needs, and lives of others within and outside their own culture. This empathy contributes to an international understanding.

**Higher Level Coursework:** Students enrolled in IB Psychology HL must complete:

- all three compulsory levels of analysis
- two options from a choice of five
- qualitative research methodology
- one simple experimental study

**IB Economics SL/HL Y1-Y2**

Course Codes: HS2113 (SL Y1), HS2123 (SL Y2); HS2134 (HL Y1); HS2144 (HL Y2)

Duration: Two years

Prerequisites: Grade 11 or Grade 12

Credits: 2.0

Economics is one of the pillars of modern society, the understanding of which is crucial for leaders in fields from politics to law and business. This course is designed to introduce economic concepts and theories and to develop the skills of economic reasoning and analysis. The course spans two years and will cover units including basic economic concepts, microeconomics, macroeconomics and the global economy. Students' grades will be based on a combination of internal assessments, such as article analyses, quizzes, unit tests, and research projects.

**Higher Level Coursework:** In addition to the content covered in IB Economics SL, the HL course adds a number of additional areas of study within each of the four units outlined above. HL students will also be asked to engage in analysis and evaluation of economic policies. This is done through the IB Assessment model which has HL students complete an additional writing assessment beyond that of the SL students.

**IB Global Politics SL/HL Y1-Y2**

Course Codes: HS2153 (SL Y1), HS2154 (SL Y2), HS2163 (HL Y1), HS2164 (HL Y2),

Duration: Two years

Prerequisites: Grade 11 or Grade 12

Credits: 2.0

The global politics course explores fundamental political concepts such as power, equality, sustainability, and peace in a range of contexts and at a variety of levels. It allows students to develop an understanding of the local, national, international and global dimensions of political activity, as well as allowing them the opportunity to explore political issues affecting their own lives.

Global politics draws on a variety of disciplines in the social sciences and humanities. It helps students to understand abstract political concepts by grounding them in real world examples and case studies, and invites comparison between such examples and case studies to ensure a transnational perspective.

**IB Business Management SL/HL Y1-Y2**

Course Codes: HS2117 (SL Y1), HS2127 (SI Y2); HS2137 (HL Y1); HS2147 (HL Y2)

Duration: Two years

Prerequisites: Full IB Diploma Students

Credits: 2.0

**Higher Level Coursework:** All students enrolled in an AP subject must sit the external exam at the end of the school year.

The Business Management course is a rigorous and dynamic course that explores how business decision-making processes are affected by, and have an impact on internal and external environments. The course covers:

- Business organisation and environment
- Human resources
- Accounting and finance
- Marketing
- Operations management

This course will be taught through Pamoja, an online IB curriculum provider. Registration priority will be given to IB Diploma students. For more information visit: <http://www.pamojaeducation.com/IB-online-courses/>

**AP Seminar**

Course Code: HS2208

Duration: Year

Prerequisites: Grade 10 or Grade 11

Credits: 1.0

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

**AP European History**

Course Code: HS2201

Duration: Year

Prerequisites: Grade 11 or Grade 12

Credits: 1.0

The study of European history since 1450 introduces students to cultural, economic, political, and social developments that played a fundamental role in shaping the world in which they live. In addition to providing a basic narrative of events and movements, the goals of AP European History are to develop (a) an understanding of some of the principal themes in modern European history, (b) an ability to analyze historical evidence and historical interpretation, and (c) an ability to express historical understanding in writing. All students enrolled in an AP subject must sit the external exam at the end of the school year.

**AP US History**

Course Code: HS2202

Duration: Year

Prerequisites: Grade 11 or Grade 12

Credits: 1.0

This intensive course covers the entirety of United States history, with a strong emphasis on preparation for the Advanced Placement exam. Strong English reading comprehension and writing skills are the primary requirements. This is considered a college-level course, taught at a college-level pace. This highly challenging course requires a great deal of self-motivation and independent learning. Thematically, the course will address the major historical and political questions of United States history. All students enrolled in an AP subject must sit the external exam at the end of the school year.

**AP Psychology**

Course Code: HS2203

Duration: Year

Prerequisites: Grade 11 or Grade 12

Credits: 1.0

The AP Psychology course is designed to introduce students to the systematic and scientific study of the behavior and mental processes of humans and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. This class is fast paced as there are fourteen units to be covered. There is a large amount of nightly reading and detailed vocabulary to grasp. All students enrolled in an AP subject must sit the external exam at the end of the school year.



By: Sara Kaste



**AP Microeconomics**

Course Code: HS2209  
 Duration: Year  
 Prerequisites: Grade 11 or Grade 12  
 Credits: 1.0

This year-long Advanced Placement (AP) Microeconomics course provides a comprehensive study of microeconomic theory and its practical applications. Students will analyze supply and demand, consumer behaviour, production theory, and market equilibrium. They will explore market structures, government intervention, and market failures. Through graphical analysis, mathematical reasoning, and real-world examples, students will develop critical thinking, problem-solving, communication and collaboration skills.

Moreover, this course will allow students to develop their ethical global citizenship by applying economic skills to case studies and analyzing economic models and theories to the real world. Through research, data collection, and analysis, students may be able to make sense of theories of societal and firm efficiency while questioning today's business model of profits seeking in a world facing pressing issues such as climate crisis. In this respect, a unique feature of this course is the market failure project that engages students in investigating their local community to identify a market failure and propose a solution.

The course prepares students for the AP Microeconomics exam through practice with multiple-choice and free-response questions, which sit in the Spring.

**AP Macroeconomics**

Course Code: HS2210  
 Duration: Year  
 Prerequisites: Grade 11 or Grade 12 Credits: 1.0

The year-long AP Macroeconomics course offers a comprehensive study of macroeconomic principles and their practical applications in the real world. Students will analyze economic indicators such as GDP, inflation, and unemployment, and investigate the factors that influence economic growth and fluctuations. They will also examine fiscal and monetary policies, international trade, and the role of governments and Central Banks through fiscal and monetary policies; they will apply critical analysis, problem-solving, and data interpretation to case studies. Finally, students will be able to gain an overall understanding of macroeconomic concepts and be able to identify their implications in other contexts or disciplines. The course will prepare students for the AP Macroeconomics Spring exam by honing their analytical skills and effective communication of economic ideas in free response prompts.

**AP Comparative Government & Politics**

Course Code: HS2205  
 Duration: Year  
 Prerequisites: Grade 11 or Grade 12  
 Credits: 1.0

This course will provide students with the conceptual tools necessary to develop an understanding of some of the world's diverse political structures and practices. The course encompasses the study of both specific countries and their governments, as well as general concepts used to interpret the political relationships and institutions found in virtually all national politics. Six countries — United Kingdom, Russia, China, Mexico, Iran, and Nigeria — represent the AP Comparative Government and Politics case study countries. They are taught because they provide a foundation for developing an understanding of different types of political systems. The course is approached through the following five units: Political systems, regimes and governments, Political institutions, Political culture and participation, Party and Electoral Systems and Citizen Organizations and Political and Economic Changes and Development. All students enrolled in an AP subject must sit the external exam at the end of the school year.

**AP World History: Modern**

Course Code: HS2206  
 Duration: Year  
 Prerequisites: Asian History  
 Credits: 1.0

AP World History is an intensive, college-level course designed to explore human history from 1200 C.E. to the present, emphasizing the development of analytical and writing skills necessary for success at a collegiate level and in preparation for the Advanced Placement exam. Strong English reading comprehension and writing skills are the primary requirements. The course devotes considerable time to the critical evaluation of primary and secondary sources, analysis of historiography (the principles, theories, or methodology of scholarly historical research and presentation), and inquiry into global connections that have shaped our present world. This course requires a significant amount of reading, writing, and researching both during and outside of class, and demands a great deal of self-motivation and independent learning. All students enrolled in an AP subject must sit the external exam at the end of the school year.

**SCIENCE COURSES**

Science Department Flow Chart

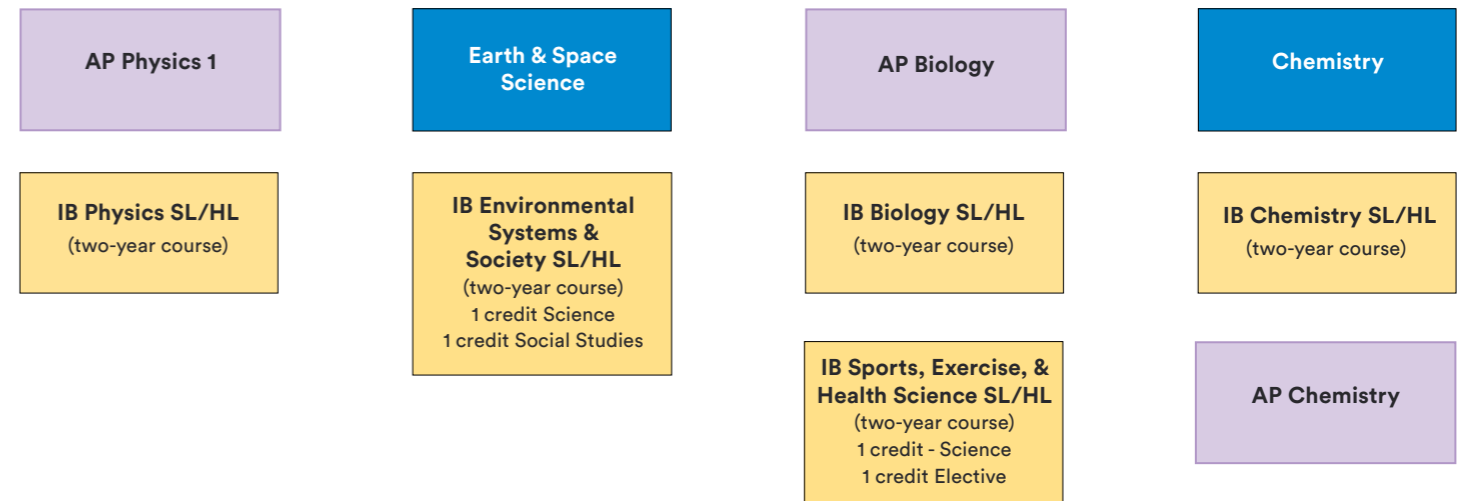
Grade 9 students must enroll in:

Physics-Chemistry Lab Science

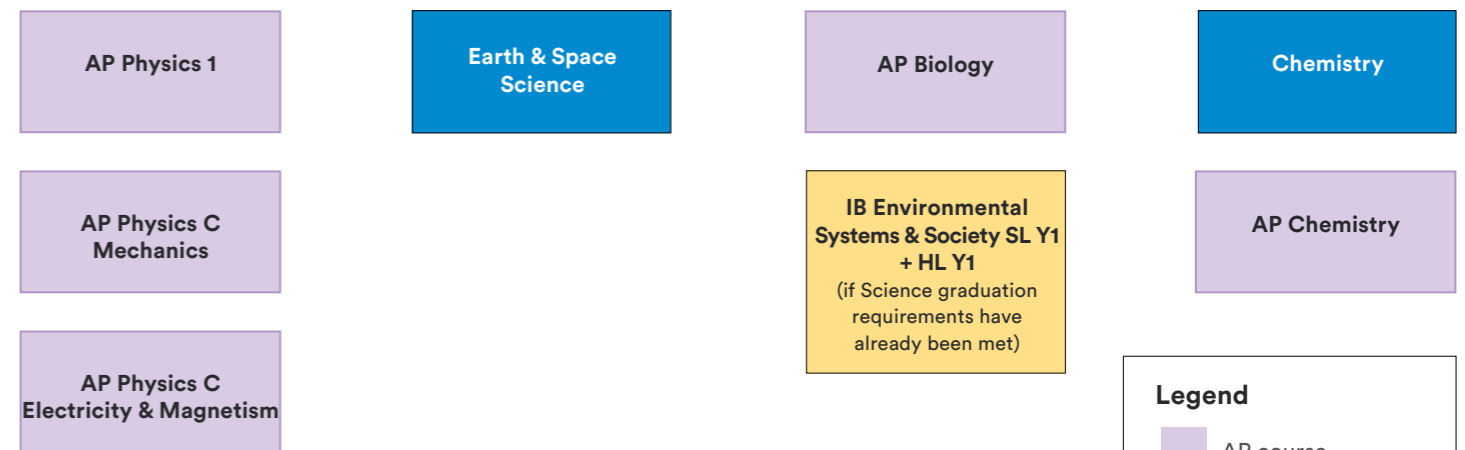
Grade 10 students must enroll in:

Biology Lab Science

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



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



**Legend**

- AP course
- IB course
- SAS course



By: Victoria Yu



**Physics-Chemistry Lab Science**

Course Code: HS4007

Duration: Year

Prerequisites: This course is for grade 9 students

Credits: 1.0

This lab science course focuses on the use of science and engineering practices to develop conceptual understandings in basic chemistry and physics. This course also explores cross-cutting concepts that unite the sciences and allow students to make connections beyond the sciences. Each student will also be required to complete an independent investigation or engineering design project that further explores an area of student interest with a physical science conceptual focus. This grade 9 lab science course is based on the Next Generation Science Standards and focuses on Physics and Chemistry. Through units on: motion; energy conservation; momentum, electrostatics; chemical reactions; factors that affect chemical reactions; equilibrium.

**Biology Lab Science**

Course Code: HS4008

Duration: Year

Prerequisites: This course is designed for grade 10 students.

Credits: 1.0

Biology is the scientific study of life. In this course we will embrace knowledge of life through scientific actions, such as: inquiry, development of models, laboratory investigations, data analysis and interpretation, mathematics, scientific argumentation, forming scientific explanations from evidence, and engaging in the scientific community through reading literature and communicating new ideas. The scientific skills that we practice and complete will not only allow us to discover biology content knowledge, but prepare us for the thinking needed to be an informed citizen and 21st century scientist.

The grade 10 Biological Lab Science course is based on the Next Generation Science Standards and focuses on the following units: Evolution, Genetics, Human Physiology, Ecosystems, and an Independent Capstone Project.

**Chemistry**

Course Code: HS4004

Duration: Year

Prerequisites: Biology Lab Science

Credits: 1.0

This Chemistry course is a high school level chemistry course designed for students who will enter AP Chemistry the following year. The same units studied in the AP Chemistry course will be examined in this course. This course will address some of the simpler concepts in each of the AP units in order to lay a strong foundation for the AP course. Lab work will be at a strong high school level, and will teach students how to be scientific inquirers.

**Earth & Space Science**

Course Code: HS4029

Duration: Year

Prerequisites: Biology Lab Science

Credits: 1.0

This Science course is based on the Next Generation Science Standards (NGSS) and seeks to prepare students to develop a better understanding of three Big Ideas that are important on the global stage:

1. What can we do about Climate Change?
2. How does natural resource distribution affect global issues?
3. How and why do humans learn about the universe?

This course is open to any Grade 11 or Grade 12 student. Much of the course evaluation is based on collaborative project work, with presentations made to audiences of many different ages across the SAS community.

**IB Environmental Systems & Society SL Y1-Y2 + HL Y1**

Course Codes: HS4115 (Y1), HS4125 (Y2)

Duration: Two years

Prerequisites: Biology Lab Science

Credits: 1.0 Science credit (Y1), 1.0 Social Studies credit (Y2)

The prime intent of this course is to provide students with a coherent perspective of the interrelationships between environmental systems and societies; one that enables them to adopt an informed, personal response to the wide range of pressing environmental issues that they will inevitably come to face. Students' attention can be constantly drawn to their own relationship with their environment and the significance of choices and decisions that they make in their own lives. It is intended that students develop a sound understanding of the interrelationships between environmental systems and societies, rather than a purely journalistic appreciation of environmental issues. Students will be evaluating the scientific, ethical and socio-political aspects of issues. As a trans-disciplinary course, IB Environmental Systems and Society is designed to combine the techniques and knowledge associated with the group 4 (experimental sciences) and with those associated with group 3 (individuals and societies). Choosing to study this course as part of the IB diploma program allows students to satisfy the requirement for both groups 3 & 4 of the hexagon. This then allows students to choose another subject from any hexagon group (including another group 3 or 4 subject). At SAS, a student enrolled in the IB Environmental Systems and Society two year course will be award a science credit for year 1 and a social studies credit for year 2.



By: Victoria Yu

**IB Sports, Exercise, & Health Science SL/HL Y1-Y2**

Course Codes: 7030 (Y1), 7031 (Y2)

Prerequisites: Physical &amp; Health Education II

Duration: Two years

Credits: 1.0 Science (Y1), 1.0 Elective (Y2)

This two-year course aims to introduce students to some of the scientific components that make up the study of sport, exercise, and health. The diploma program course in Sports, Exercise, and Health Science involves the study of the science that underpins physical performance and provides the opportunity to apply these principles.

As stated in the IB guide, this course incorporates the traditional disciplines of anatomy and physiology, biomechanics, psychology, and nutrition, which are studied in the context of sport, exercise, and health. Students will cover both core and option topics and carry out practical (experimental) investigations in both laboratory and field settings. This will provide an opportunity to acquire the knowledge and understanding necessary to apply scientific principles and critically analyze human performance. Where relevant, the course will address issues of internationalism and ethics by considering sport, exercise, and health relative to the individual and in a global context.

**Higher Level Coursework:** Students at HL are required to study additional higher level (AHL) material, conduct extra hours in the lab, and cover further HL topics within the options. The distinction between SL and HL is one of breadth and depth. Additional units include further anatomy; the endocrine system; fatigue; friction and drag; skill acquisition and analysis; genetics and athletic performance, and exercise and immunity.

**IB Biology SL/HL Y1-Y2**

Course Codes: HS4110 (SL Y1), HS4120 (SL Y2); HS4130 (HL Y1); HS4140 (HL Y2)

Duration: Two years

Prerequisites: Biology Lab Science

Credits: 2.0

IB Biology is a Group 4 experimental science with content organized by theme, including: Unity and diversity, Form and function, Interaction and interdependence, and Continuity and change over the 4 levels of organization (molecules, cells, organisms, ecosystems). Also, 25% of the time in the course will be reserved for practical work and experiment-based projects. All students will complete an independent laboratory investigation as their internal assessment and be involved in a collaborative science project with the other Group 4 sciences of the same year.

**IB Chemistry SL/HL Y1-Y2**

Course Codes: HS4111 (SL Y1), HS4121 (SI Y2); HS4131 (HL Y1); HS4041 (HL Y2)

Duration: Two years

Prerequisites: Biology Lab Science

Credits: 2.0

IB "The IB DP Chemistry course offers a rigorous and comprehensive exploration of the nature of science. Through a combination of theoretical knowledge and practical applications, students will delve into the intricacies of chemistry. They will learn the significance of modeling and simulations in understanding complex phenomena, while also developing advanced experimental techniques. Approaches to learning will be emphasized, fostering critical thinking and problem-solving skills. Students will explore the relationships between observations, patterns, and trends, and formulate hypotheses based on scientific evidence. They will also develop proficiency in measurement and data analysis, enabling them to analyze and evaluate scientific information. The course will

highlight the global impact of science, emphasizing key terminology, concepts, and the ability to critically analyze and evaluate scientific theories.

HL Course Content:

The HL coursework of the IB DP Chemistry course expands upon the fundamental understanding gained in the SL course. With additional mathematical skills and in-depth exploration of conceptually demanding topics, HL students develop a solid foundation for university-level study. The 240 teaching hours provide ample time to cover the broader and deeper content, fostering the ability to make connections across diverse areas of the syllabus and expanding their networked knowledge. The HL course offers students an opportunity to further enhance their chemistry expertise and prepare for advanced academic pursuits."

**IB Physics SL/HL Y1-Y2**

Course Codes: HS4112 (SL Y1), HS4122 (SL Y2); HS4132 (HL Y1); HS4142 (HL Y2)

Duration: Two years

Prerequisites: Biology Lab Science; IM3 or higher level Math course

Credits: 2.0

IB Physics is a two year course designed for students who want to be introduced to a wide variety of physics areas. The course is organized into five themes, i) Space, motion, and time, ii) The nature of matter, iii) Wave Behavior, iv) Fields, v) Nuclear and Quantum Physics. Experimental work is a large component of the course and there are also engineering based projects. The HL option includes additional content on higher level topics in physics such as electromagnetic induction, quantum physics, and relativity. IB Physics is recommended for those that would like to pursue any engineering or physics-based course at university. A solid understanding of algebraic manipulation is recommended to be successful in the course.

**AP Biology**

Course Code: HS4200

Duration: Year

Prerequisites: Biology Lab Science

Credits: 1.0

The AP Biology course is designed to help students develop advanced inquiry and reasoning skills, such as designing a plan for collecting data, analyzing data, applying mathematical routines, using models, justifying claims and connecting concepts in and across domains. The conceptual study of the course is based on the four following big ideas: 1) The process of evolution drives the diversity and unity of life; 2) Biological systems utilize free energy and molecular building blocks to grow, to reproduce, and to maintain dynamic homeostasis; 3) Living systems store, retrieve, transmit, and respond to information essential to life processes; 4) Biological systems interact, and these systems and their interactions possess complex properties. This AP Biology course is equivalent to a two-semester college introductory biology course. Every student enrolled in this course must sit the external exam at the end of the year.

**AP Chemistry**

Course Code: HS4201  
 Duration: Year  
 Prerequisites: Biology Lab Science  
 Credits: 1.0

The AP Chemistry course is designed to be the equivalent of the general first year university chemistry course taken by college freshmen. A range of topics are covered, spanning physical and analytical chemistry. The major units in the course are centered around the 'Big Ideas' from the College Board. The units include:

- Introduction/Scientific Method
- Atomic Structure
- Periodicity
- Chemical Bonding and Properties
- Stoichiometry
- Thermochemistry
- Gases, Liquids, Solids
- Equilibrium
- Acids and Bases
- Kinetics
- Electrochemistry

Students will complete a range of college level laboratory experiments, a number of which will be inquiry based. Students are expected to take tangible responsibility for their learning with a large amount of work required outside of class in order to make the most of the time in class. All students enrolled in an AP subject must sit the external exam at the end of the school year.

**AP Physics 1**

Course Code: HS4210  
 Duration: Year  
 Prerequisites: Biology Lab Science; IM3 or higher level Math course  
 Credits: 1.0

This algebra based AP Physics program provides a systematic study of the principles of physics and emphasizes the development of critical thinking and problem-solving ability. The course covers Newtonian mechanics including rotational dynamics and angular momentum, work, energy and power, fluids. It is assumed that the student is familiar with algebra and basic trigonometry. This course offers the essential foundation in physics, preparing students for science related courses. All students enrolled in an AP Subject must sit the external exam at the end of the school year.

**AP Physics C: Mechanics**

Course Code: HS4208  
 Duration: Year  
 Prerequisites: Biology Lab Science; IM3+ or Advanced Pre Calculus Math Course  
 Credits: 1.0

This calculus based physics course is a recommended option for any students considering engineering or physics based degrees at university. The course covers seven units across the wide area of mechanics, the units are

- Kinematics
- Newton's Laws of Motion
- Work, Energy, and Power
- Systems of particles and Linear momentum
- Rotation
- Oscillations
- Gravitation

The course will involve learning how to apply calculus to model more real life physics situations and a large component of experimental work/project based assessment. Completing a calculus based math course previously or concurrently is not required but a strong mathematical background such as pre-calculus is highly recommended. This course will teach the calculus required for Physics C Mechanics within it. This course is required to register for AP Physics C: Electricity and Magnetism.

**AP Physics C: Electricity & Magnetism**

Course Code: HS4209  
 Duration: Year  
 Prerequisites: Biology Lab Science; IM3+ or Advanced Pre Calculus Math Course; Completion of AP Physics C Mechanics in advance or concurrently taking the course.  
 Credits: 1.0

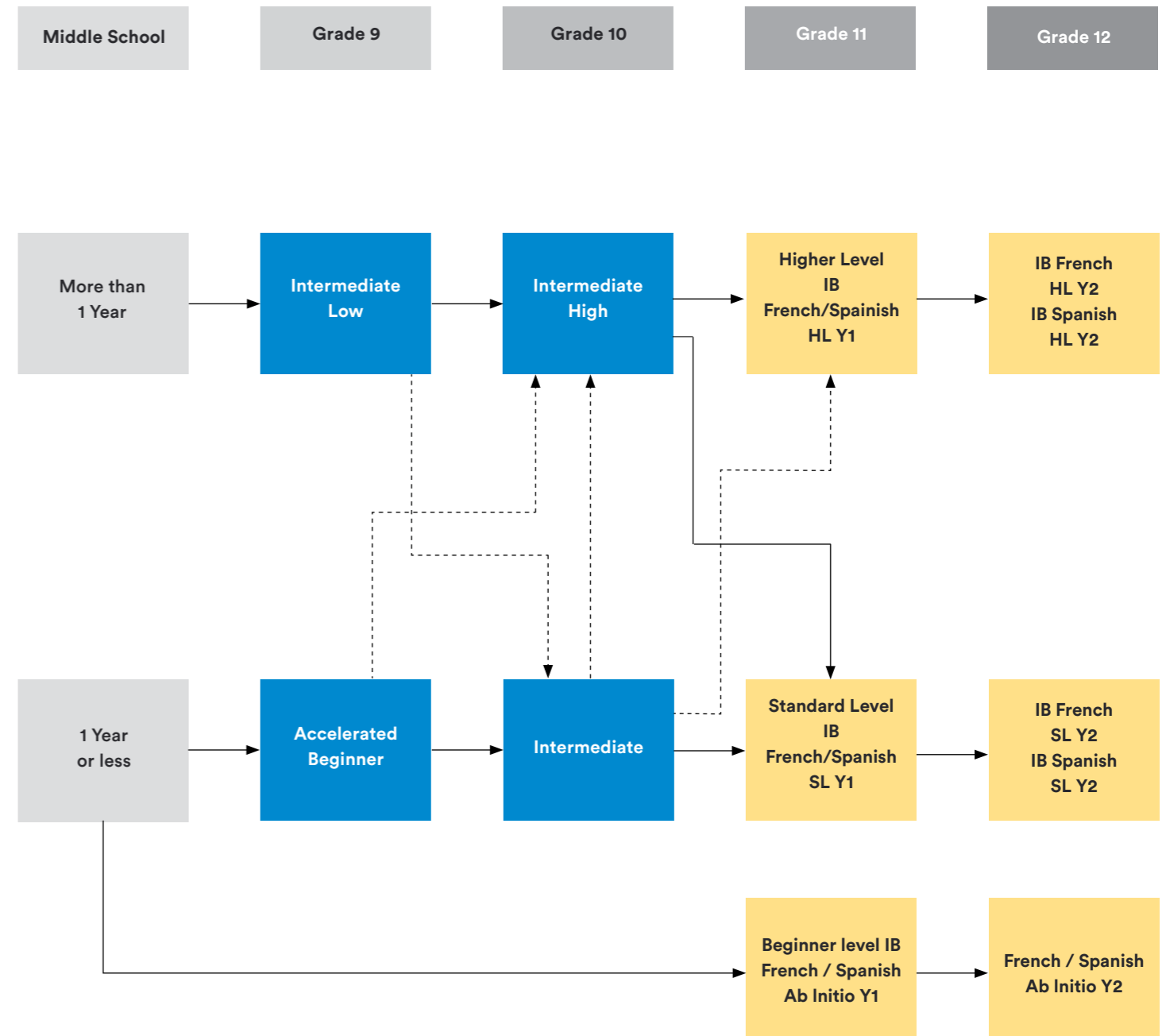
This calculus based physics course is a good option for any students considering engineering or physics based degrees at university, but is less of a requirement than the Mechanics course. The course covers five units across the wide area of electricity and magnetism, the units are

- Electrostatics
- Conductors, Capacitors, and Dielectrics
- Magnetic Fields
- Electromagnetism

The course will involve learning how to apply calculus to model more real life physics situations and a large component of experimental work/project based assessment. Completing a calculus based math course previously or concurrently is not required but a strong mathematical background such as pre-calculus is highly recommended. Completion of AP Physics C Mechanics or taking the two courses concurrently is a pre-requisite for this course.

**GLOBAL LANGUAGES COURSES (FRENCH AND SPANISH)**

Global Languages Department Flow Chart



**Legend**

- IB course
- SAS course

Ab Initio is a two-year program for students with no to limited background in the language of study.



**Accelerated Beginner French****Course Code:** HS 5054**Duration:** One Year**Prerequisites:** None**Credits:** 1.0

This course is for Grade 9 students who are complete or almost complete beginners, with no more than one year of experience studying the language. It is a fast-paced and demanding course covering 3 semesters in two. Students will be introduced to vocabulary, grammar, and culture across a wide range of common topics designed to quickly build their communication skills. By the end of the course, students will be able to hold a 5-minute conversation and write a 100–150-word text. Students will also be able to understand audio and written texts on common topics. Students will also be able to communicate in the past, present, and future.

**Intermediate Low French****Course Code:** HS 5056**Duration:** One Year**Prerequisites:** More than one year of studies in Middle School, or teacher recommendation**Credits:** 1.0

This course is for Grade 9 students who have more than one year of experience studying the language in Middle School. The course consolidates and reviews the skills, grammar, and vocabulary learned up to this point in a range of familiar and unfamiliar contexts. This course introduces new tenses and more complex grammatical patterns. It is also a continued study of Francophone cultures. By the end of the year, students will be capable communicators, who are able to converse in French on a variety of topics, take part in simple discussions, and write a minimum of 150 words for different purposes. Students will be assessed regularly with quizzes and tests, projects, reading and listening comprehension tasks, written compositions, oral presentations, and conversations. Students completing this course would usually progress to Intermediate High French.

**Intermediate French****Course Code:** HS5055**Duration:** One Year**Prerequisites:** Beginner French Course or teacher recommendation**Credits:** 1.0

This course is primarily for Grade 10 students who have studied the Beginner French Course in Grade 9. It is a fast-paced and demanding course covering 3 semesters in two. Students will be introduced to vocabulary, grammar, and culture across a wider range of common topics designed to quickly build their communication skills in preparation for further study at the IB level at Standard or Higher Level.

By the end of the course, students will be able to hold a 7-minute conversation and write a minimum of 150 words. Students will also be able to understand longer and more complex audio and written texts. Students will be able to use several past and future tenses, together with the present tense.

**Intermediate High French****Course Code:** HS 5057**Duration:** One Year**Prerequisites:** Intermediate Low French Course.**Credits:** 1.0

This course is primarily for Grade 10 students who have studied the Intermediate Low French Course in Grade 9. This high intermediate course aims to develop students' autonomy by extending the skills, grammar and vocabulary learned previously. It extends intercultural competency through an exploration of Francophone cultures. The course uses a range of authentic resources (texts, interactive websites, songs, movies, etc.) to emphasize learning through various approaches and to give students opportunities to express themselves in an increasingly comfortable manner at a high intermediate level. By the end of the year, students will aim to be effective communicators, who are able to understand and communicate in French on a variety of topics and for a variety of purposes. Students will be assessed regularly with quizzes and tests, reading, and listening comprehension tasks, as well as written and interactive oral productions. Students will begin to explore more abstract topics and themes in preparation for further study at IB Higher Level.

**IB French B SL/HL Y1-Y2****Course Codes:** HS5110 (SL Y1); HS5120 (SL Y2); HS5130 (HL Y1); HS5140 (HL Y2)**Duration:** Two years**Prerequisites:** Intermediate French Course, or Intermediate High French Course or teacher recommendation**Credits:** 2.0

French B is a language acquisition course primarily designed for students with solid previous experience in the target language. In the Language B course, students further develop their ability to communicate in French through the study of language, themes, and texts. In doing so, they also develop a conceptual understanding of how languages work and international mindedness through the study of the French language and Francophone cultures. At both B SL/HL levels students learn to communicate in French in the five prescribed themes: Identities, Experience, Human ingenuity, Social Organization, and Sharing the Planet. The French B course provides students with a basis for further study, work, and leisure using an additional language. Students will be assessed regularly with quizzes and tests, reading, and listening comprehension tasks, as well as individual written and oral productions. At the end of the second year, students will sit the externally assessed IB exams. Higher Level Coursework: The study of two literary works originally written in French.

**IB French Ab Initio SL Y1-Y2****Course Codes:** HS5151 (Y1), HS5152 (Y2)**Duration:** Two years**Credits:** 2.0

The Ab Initio program is an intensive language course that covers the equivalent of three years of French over the course of two years and is assessed externally through the IB exam. The program meets the needs of those IB students who have no or very limited previous experience of learning French and are interested in learning a new foreign language as part of their IB Diploma. The aims of this course are to develop students' ability to communicate for familiar and practical needs. It introduces students to Francophone cultures and countries and provides them with a foundation for further study. This course is organized into the five prescribed themes: Identities, Experience, Human ingenuity, Social Organization and Sharing the Planet. Students will be assessed regularly with quizzes and tests, reading, and listening comprehension tasks, as well as individual written and oral productions.

**Accelerated Beginner Spanish****Course Code:** HS5058**Duration:** One Year**Prerequisites:** None**Credits:** 1.0

This course is for Grade 9 students who are complete or almost complete beginners, with no more than one year of experience studying the language. It is a fast-paced and demanding course covering 3 semesters in two. Students will be introduced to vocabulary, grammar, and culture across a wide range of common topics designed to quickly build their communication skills. By the end of the course, students will be able to hold a 5-minute conversation and write a 100–150-word text. Students will also be able to understand audio and written texts on common topics. Students will also be able to communicate in the past, present, and future.

**Intermediate Low Spanish****Course Code:** HS 5060**Duration:** One Year**Prerequisites:** More than one year of studies in Middle School, or teacher recommendation**Credits:** 1.0

This course is for Grade 9 students who have more than one year of experience studying the language in Middle School. The course consolidates and reviews the skills, grammar, and vocabulary learned up to this point in a range of familiar and unfamiliar contexts. This course introduces new tenses and more complex grammatical patterns. It is also a continued study of Hispanic cultures. By the end of the year, students will be capable communicators, who are able to converse in Spanish on a variety of topics, take part in simple discussions, and write a minimum of 150 words for different purposes. Students will be assessed regularly with quizzes and tests, projects, reading and listening comprehension tasks, written compositions, oral presentations, and conversations. Students completing this course would usually progress to Intermediate High Spanish.

**Intermediate Spanish****Course Codes:** HS5059**Duration:** One Year**Prerequisites:** Beginner Spanish Course, or teacher recommendation**Credits:** 1.0

This course is primarily for Grade 10 students who have studied the Beginner Spanish Course in Grade 9. It is a fast-paced and demanding course covering 3 semesters in two. Students will be introduced to vocabulary, grammar, and culture across a wider range of common topics designed to quickly build their communication skills in preparation for further study at IB Standard or Higher Level.

By the end of the course, students will be able to hold a 7-minute conversation and write a minimum of 150 words. Students will also be able to understand longer and more complex audio and written texts. Students will be able to use several past and future tenses, together with the present tense.

**Intermediate High Spanish****Course Code:** HS5061**Duration:** One Year**Prerequisites:** Intermediate Low Spanish Course, or upon teacher recommendation, Beginner Spanish Course**Credits:** 1.0

This course is primarily for Grade 10 students who have studied the Intermediate Low Spanish Course in Grade 9. This high intermediate course aims to develop students' autonomy by extending the skills, grammar and vocabulary learned previously. It extends intercultural competency through an exploration of Hispanic cultures. The course uses a range of authentic resources (texts, interactive websites, songs, movies, etc.) to emphasize learning through various approaches and to give students opportunities to express themselves in an increasingly comfortable manner at a high intermediate level. By the end of the year, students will aim to be effective communicators, who are able to understand and communicate in Spanish on a variety of topics and for a variety of purposes. Students will be assessed regularly with quizzes and tests, reading, and listening comprehension tasks, as well as written and interactive oral productions. Students will begin to explore more abstract topics and themes in preparation for further study at IB High Level.

**IB Spanish Ab Initio SL Y1-Y2****Course Codes:** HS5155 (Y1), HS5156 (Y2)**Duration:** Two years**Prerequisites:** None – No more than one year of experience studying the language**Credits:** 2.0

The Ab Initio program is an intensive language course that covers the equivalent of three years of Spanish over the course of two years and is then assessed externally through the IB exam. It is meant for students who have no previous experience of learning the language. The program meets the needs of those 18 students who have had little or no opportunity for foreign language study in their earlier education and are interested in learning a new foreign language as part of their IB Diploma. The aims of this course are to develop the student's ability to communicate, in speech and in writing, in order to enable them to deal adequately with familiar and practical needs; introduce students to the culture of the countries where the language is spoken through the study of the target language; provide students with a foundation for further study of the target language; provide enjoyment and intellectual stimulation; and encourage positive attitudes towards the learning of other languages and their speakers and countries. This course is organized in five prescribed themes: Identities, Experience, Human ingenuity, Social Organization and Sharing the planet.

**IB Spanish B SL/HL Y1-Y2**

Course Codes: HS5111 (SL Y1); HS5121 (SL Y2); HS5131 (HL Y1); HS5141 (HL Y2)  
 Duration: Two years  
 Prerequisites: Intermediate Spanish Course, Intermediate High Spanish Course, or teacher recommendation  
 Credits: 2.0

Spanish B 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 Spanish 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 Spanish language and Hispanic cultures. At both levels of language B (SL and HL), students learn to communicate in Spanish 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. Spanish B provides students with a basis for further study, work, and leisure using an additional language. Students will be assessed regularly with quizzes and tests, reading, and listening comprehension tasks, as well as individual written and oral productions. At the end of the second year, students will sit the externally assessed IB exams. Higher Level Coursework: The study of two literary works originally written in Spanish.

**IB Self-Taught Language A1 SL Y1-Y2**

Course Codes: HS5102 (Y1); HS5103 (Y2) Duration: Two years  
 Prerequisites: Fluency in native language Credits: 2.0

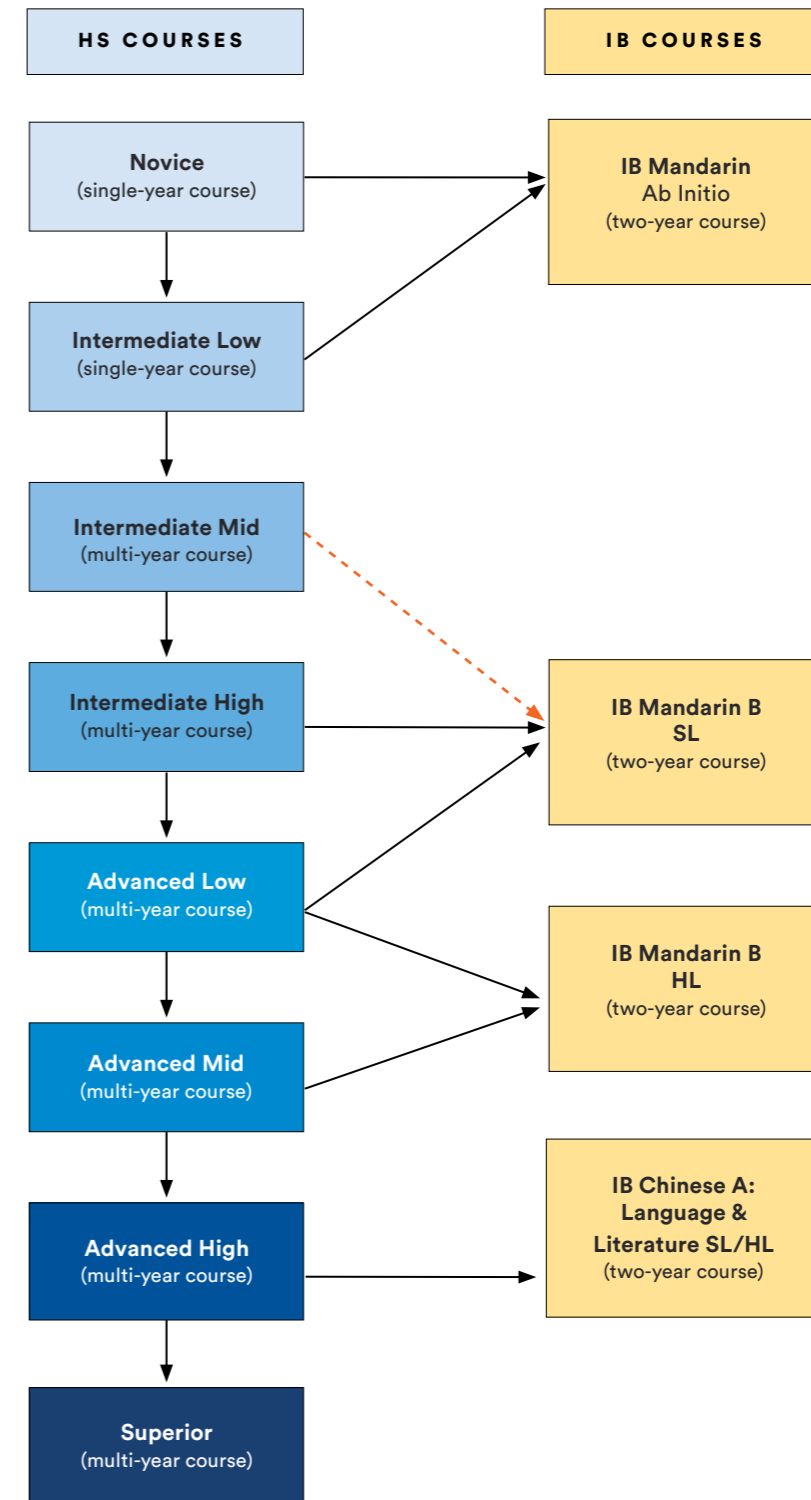
This is designed as an independent study of literature for students in their native or best academic language, excluding English. Students examine 11 works of literature, five of which must be world literature in translation. The course is designed for students who desire enrichment in the study of literature in a language other than English. The emphasis of the course will be on independent literary analysis and the writing of clear, balanced, well-organized prose in the student's native language. Written and spoken communication will be assessed through internal (school) and external (IBO) assessment. All students enrolled in an IB subject must sit the external exam at the end of year 2.



By: Jessica Yang

**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.

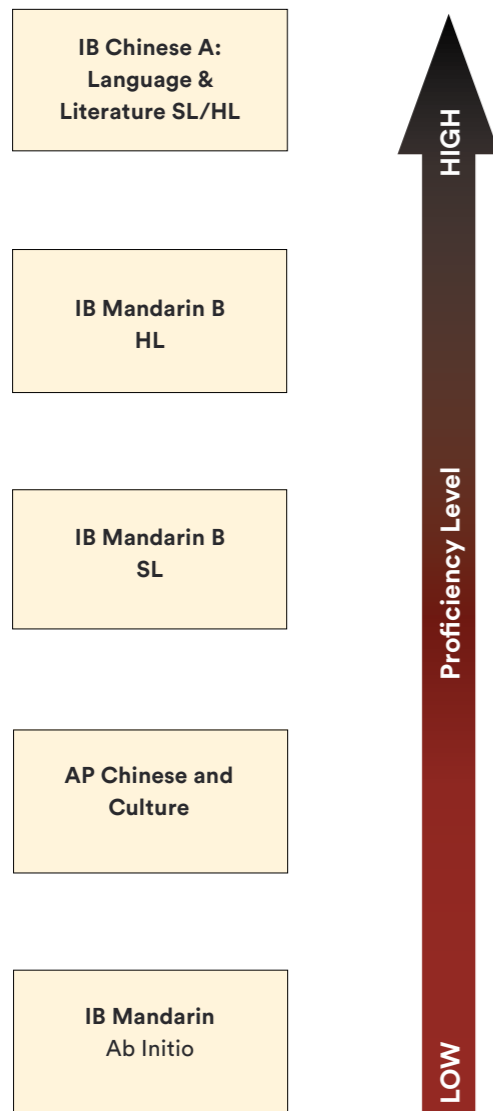
May require support and/or summer work

**Legend**

- IB course
- SAS course



**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 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 and Intermediate Mid 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).

**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 thought, 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**

Chinese curriculum offers texts, assessments as well as support for reading levels ranging from basic text of foundation literacy to advanced high level courses as well as 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
- Superior

**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:** Novice High oral proficiency according to ACTFL standards. This means that a student can answer a variety of familiar questions about topics related to daily life using complete sentences most of the time. When prompted, he/she can ask a variety of familiar questions.

**Reading:** 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:** Intermediate Low oral proficiency according to ACTFL standards. This means that a student can answer a wide variety of familiar and original questions about his/ her daily life. He/ she answers prompts consistently in complete sentences. He/ she is able to ask a variety of questions and talk about topics related to daily life in a series of sentences.

**Reading:** 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. Students have a vocabulary base of approximately 150 commonly used 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:** Intermediate Mid oral proficiency according to ACTFL standards. This means that a student can ask and answer a wide variety of original questions about his/her daily life. He/ she speaks consistently in connected sentences that show originality of thought and the ability to solve authentic problems.

**Reading:** Students can independently read a variety of books or text containing 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.

**Intermediate High Chinese**

Course Code: HS3033  
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 expanding 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 oral proficiency according to ACTFL standards. This means that a student can maintain a conversation on a variety of topics of daily life and make connections to topics beyond self. He/ she is able to compare and contrast ideas using paragraph length discourse adding a variety of details.

**Reading:** Students can independently read a variety of books and text containing 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.

**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

This 1-2 year course is designed to enable students to emerge with conversation and literacy at an academic level. Successful completion of this course means that students will be able to demonstrate mastery of the following skills:

**Oral language:** Advanced Low oral proficiency as demonstrated by ACTFL standards. This means that a student can maintain a prolonged conversation on a few academic topics in a way that demonstrates high levels of accuracy, development of thought, and precision of vocabulary appropriate to the topic at hand.

**Reading:** Students can independently read a variety of books containing prolonged text of multiple paragraphs with little support of images or contextual clues.

**Writing:** Students can independently write a series of paragraphs to narrate, inform and state opinion. The text has detail and examples related to the topics. There is some formality of vocabulary.

**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

This 1-2 year course is designed to enable students to discuss and engage with a wide variety of academic and literary text. Successful completion of this course means that students will be able to demonstrate mastery of the following skills:

**Oral language:** Advanced Mid oral proficiency according to ACTFL standards. This means that a student can maintain a prolonged and sophisticated conversation on a wide variety of academic topics in a way that demonstrates high levels of accuracy, critical thinking, cultural understanding and precision of vocabulary appropriate to the topic at hand.

**Reading:** Students can independently read a variety of books of emerging literary interest and differing styles.

**Writing:** Students can independently narrate, inform or state opinion in writing with specific detail, formality of vocabulary and clear organization.

**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

This 1-2 year course enables students to engage in literary analysis across a variety of genres. Successful completion of this course means that students will be able to demonstrate mastery of the following skills:

**Oral language:** Students demonstrate Advanced High oral proficiency according to ACTFL standards. This means that a student can engage in prolonged philosophical conversations that demonstrate original connections with literature, history and current events in a nuanced and culturally sensitive manner.

**Reading:** Students can engage in literary analysis across a variety of genres.

**Writing:** Students can narrate, inform or persuade in clearly organized discourse with use of rhetorical questions, quotes, specific details, and use of formal and literary language.

**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 &amp; 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 Superior**

Course Codes: HS5147

Duration: 1-2 years

Prerequisites: Successful demonstration of the skills of the Advanced High course

Credits: 1.0

This 1-2 year course enables students to engage in literary analysis across a wide variety of genres, characterized by complexity of structure. Successful completion of this course means that students will be able to demonstrate mastery of the following skills:

**Oral language:** Students demonstrate Superior oral proficiency according to ACTFL standards. This means that a student can tailor language to a variety of audiences by adapting their speech and register in ways that are culturally authentic. At this level, their oral discourse typically resembles written discourse.

**Reading:** Students can understand a wide variety of texts from many genres including professional, academic, and literary nature. In addition, readers at the Superior level are generally aware of the aesthetic properties of language and of its literary styles. They continue to develop the understanding of the texts in which cultural references and assumptions are deeply embedded.

**Writing:** Students at this level can produce writing that is sophisticated and directed to sophisticated readers. Writers at this level write to their audience; they tailor their language to their readers.



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**VISUAL ARTS COURSES**

**Visual Arts Department Flow Chart**

Grade 9 students may take:

Art Lab

Art Coded

Grade 10 students may chose any of the courses below based upon meeting prerequisites.

Innovation Institute students will take:

Art Lab

Art Coded

Innovation & Design  
(Grade 10)

Intermediate Art Studio

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

Art Lab

Art Coded

IB Film SL/HL  
(two-year course)

Intermediate Art Studio

Advanced Art Studio

IB Visual Art SL/HL  
(two-year course)

**Legend**

- IB course
- SAS course

**Art Lab**

Course Code: HS6205  
Duration: Year  
Prerequisites: None  
Credits: 1.0

This is not your typical introductory art course. Artlab is a place of experimentation and creativity. It is a place where we learn to see the world in a new way, try new things and hone our craft into meaningful artwork. In the lab, we'll paint with a brush, but we'll also paint with a stylus. We'll sculpt, build and cut with our hands, but we'll also use 3D printers, laser cutters, and the most important tool - your imagination. Each unit will allow students to learn how to generate and develop ideas and artwork, increase their knowledge and understanding of movements and artists, and learn how to analyze, respond and become inspired. Sketchbooks, projects and class critiques will support the development of critical thinking and creativity skills. This course is a recommended prerequisite for all future art courses. Artlab: Imagine. Craft. Build.

**Art Coded**

Course Code: HS6050  
Duration: Year  
Prerequisites: one previous art course  
Credits: 1.0

Learn how to integrate computers, electronics, motors, LEDs and code to create interactive art projects. This course will utilize the tools in the MakerSpace and Fablab and a variety of electromechanical and software devices to create works of art. Not only will students be learning how to code and use circuits, they will also be developing their art skills by using a variety of traditional and nontraditional medium. Each project created in this class will be developed utilizing a sketchbook to develop an artist process. The projects will have specific goals and objectives to include specific concepts as students obtain more skills; however all projects will allow individual creativity to interpret the project where the student's inspiration leads.

**Innovation & Design**

Course Code: HS6051  
Duration: Year  
Prerequisites: This course is only open to Innovation Institute Grade 10 students.  
Credits: 1.0

This course allows Grade 10 students in the Innovation Institute program to build on skills developed in Creativity and Design and introduces them to new forms of contemporary media and art making. Students will analyze contemporary media and develop the skills to create effective forms of communication in both still (photography, graphic design) and moving images. Students will consider the importance of the integration of arts into STEM disciplines through design and creative thinking, in order to improve functionality and communication of meaning. To this end, students will learn how to build and test electronic circuits and create controllable electromechanical devices.

**Intermediate Art Studio**

Course Code: HS6207  
Duration: Year  
Prerequisites: Art Foundation or Creativity & Design or permission from the teacher  
Credits: 1.0

This course is intended for students who are interested in deepening their exploration of different art techniques, media and ideas. In order to help students become more thoughtful and skilled artists, projects will emphasize both technical skill development as well as conceptual problem solving skills. The year is comprised of both teacher and student directed assignments. Students will explore a variety of 2-D and 3-D media and techniques. Students will use sketchbooks to develop their visual ideas, to research the context of art-making, both historical and contemporary, and for personal reflection.

**Advanced Art Studio**

Course Code: HS6208  
Duration: Year  
Prerequisites: Two years of art courses  
Credits: 1.0

Advanced Art Studio is intended for students who are interested in pursuing their artwork independently, without the formality of an external exam. This course is both theme-based and student lead. Over the course of the year, teacher initiated themes with open media choice progress towards independent student lead projects. Students will utilize sketchbooks to help in the development of their ideas. The format of Advanced Art Studio will allow for the creation of a personal portfolio of artwork in a wide variety of media, which may be used to apply to university or just for fun! This course will help students develop a personal sense of who they are as an artist. This course may be taken for multiple years.



By: Carmela D'Ambrosio

**IB Visual Art SL/HL Y1-Y2**

Course Codes: HS6110 (SL-Y1); HS6120 (SL-Y2); HS6130 (HL-Y1); HS6140 (HL-Y2)  
 Duration: Two years  
 Prerequisites: None  
 Credits: 1.0

IB Visual Art is intended for students who have a serious interest in the visual arts, and possess a high level of commitment to studio and written work. This two-year course requires students to investigate theoretical, art making, and curatorial practices. In order to be successful, students are expected to create an in-depth and personal body of work developed through an independent exploration of artists, ideas, materials and techniques. Students will generate and refine their ideas through the use of visual journals called a Process Portfolio. These journals require a dedication to and documentation of personal research and the exploration of media, technical skills, and the analysis of thematic, cultural, historical, aesthetic issues related to art. IB art students are also expected to create a comparative study in which they analyze, compare, and contrast works by self-selected artists. This research should impact on the student's development as an artist, as well as their art making practices.

This course of study ends with the completion of a written final comparative study, a written process portfolio and an individual exhibition in which students produce and curate a body of work completed over the two years. The work is examined externally by IB.

Please see below for requirements.

**Standard Level Coursework:**

Process Portfolio: SL students submit 9–18 screens which document their creative process.

Comparative Study: SL students will submit 10–15 screens which examine and compare at least three artworks.

Final Exhibition: SL students will exhibit 4-7 final pieces.

**Higher Level Coursework:**

Process Portfolio: HL students submit 13–25 screens which document their creative process.

Comparative Study: HL students submit 10–15 screens which examine and compare at least three artworks. HL students submit 3–5 additional screens which analyze the extent to which their work and practices have been influenced by the art and artists examined.

Final Exhibition: HL students will exhibit 8-11 final pieces.

**IB Film SL/HL Y1-Y2**

Course Codes: HS8165 (SL Y1); HS8175 (SL Y2); HS8185 (HL Y1); HS8195 (HL Y2)  
 Duration: Two years  
 Prerequisites: None  
 Credits: 2.0

Film literacy is a critical skill for the 21st century in which most of the media that we consume, and produce is delivered in this fashion. Throughout the two-year IB Film HL course, we will analyze how meaning is created and communicated in film language. We will study popular films, independent films, foreign films, and classic films. After we deconstruct these films down to their basic structures, we'll use those building blocks to make our own powerful films that tell engaging stories. In SL and HL, we will complete a close textual analysis in year one and will be working towards two other assessments in year two. These include a comparative study of two films in a topic of your choosing and a production portfolio of your work in different film roles.

HL students are expected to complete a fourth assessment, which is a collaborative film project.

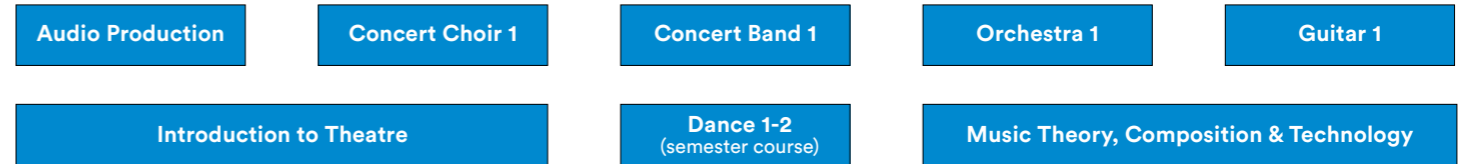


By: Victoria Yu

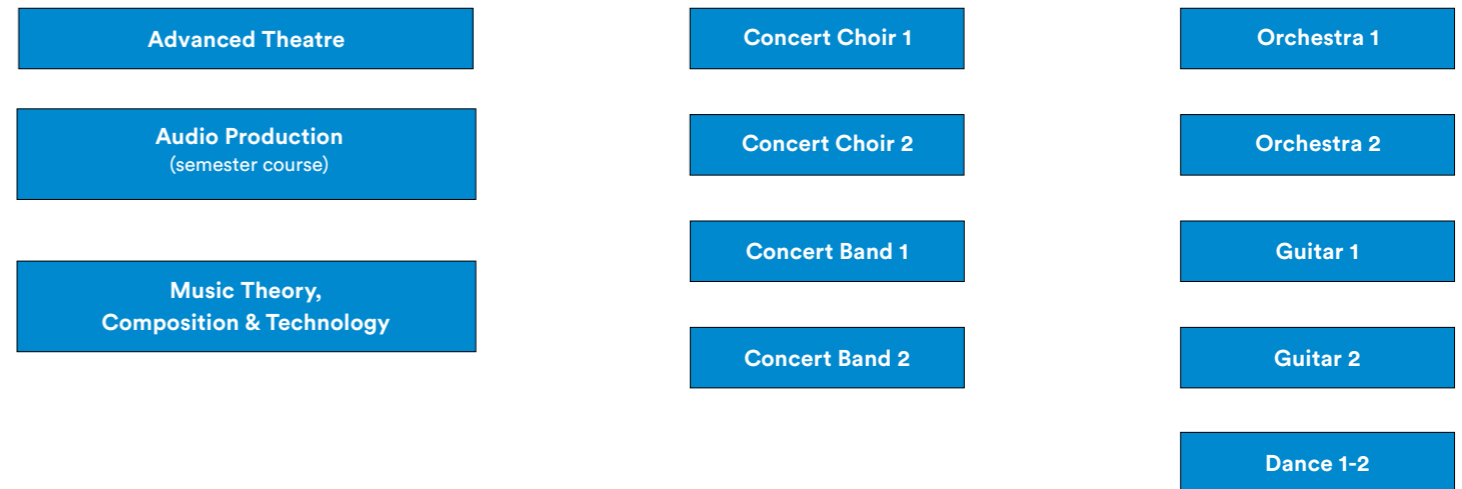
**PERFORMING ARTS COURSES**

**Performing Arts Department Flow Chart**

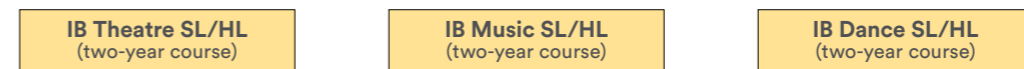
Grade 9 students may choose the course below based on meeting prerequisites:



Grade 10,11 and 12 students may choose any of the courses below based on meeting prerequisites:



Grade 11 and 12 students may choose any of the courses above based on meeting prerequisites plus the two IB courses below.



**Legend**

- IB course
- SAS course



**Concert Choir 1**

Course Code: HS6020

Duration: Year

Prerequisites: None. Concert Choir 1 can be taken more than once.

Credits: 1.0

Concert choir is a performing group open to any student who can demonstrate an ability to match pitch and stay on a part. Choral literature of three to four parts, from the Renaissance to the present, is rehearsed and performed. Students will develop skills in vocal production, note and rhythm reading, listening, and conducting. Pianists are encouraged to audition for the accompanist role.

**Concert Choir 2**

Course Code: HS6021

Duration: Year

Prerequisites: Teacher placement. Concert Choir 2 can be taken more than once.

Credits: 1.0

Concert choir is a performing group open to any student who can demonstrate an ability to match pitch and stay on a part. Choral literature of three to four parts, from the Renaissance to the present, is rehearsed and performed. Students will develop skills in vocal production, note and rhythm reading, listening, and conducting. Pianists are encouraged to audition for the accompanist role.

**Concert Band 1**

Course Code: HS6022

Duration: Year

Prerequisites: One year previous experience required. Concert Band 1 can be taken more than once.

Credits: 1.0

Concert Band 1 (Intermediate) is open to all woodwind, brass, and percussion players who have at least one year of experience on their chosen instrument. Specific instrumental technique, ensemble skills, theoretical literacy, and historical awareness will be developed through the performance of a variety of Concert Band literature. This ensemble will build upon previous band experiences.

**Concert Band 2**

Course Code: HS6023

Duration: Year

Prerequisites: Teacher placement. Concert Band 2 can be taken more than once.

Credits: 1.0

Concert Band 2 is open to experienced woodwind, brass, and percussion players. Specific instrumental technique, ensemble skills, theoretical literacy, and historical awareness will be developed through the performance of a variety of Concert Band literature. This ensemble will build upon the Intermediate Concert Band experience. Please consult with your current teacher before requesting this course.

**Orchestra 1**

Course Code: HS6024

Duration: Year

Prerequisites: One year experience or permission of teacher required.

Orchestra 1 can be taken more than once.

Credits: 1.0

Orchestra 1 is open to string players who wish to gain ensemble experience. Specific instrumental techniques, ensemble skills, theoretical literacy, and historical awareness develop through the performance of a variety of orchestral literature from the Baroque period to Classical periods plus other miscellaneous repertoire. Orchestra 1 generally comprises Grade 9 and 10 students, though students from all year levels can join.

**Orchestra 2**

Course Code: HS6025

Duration: Year

Prerequisites: Teacher placement. Orchestra 2 can be taken more than once.

Credits: 1.0

Orchestra 2 is the advanced String Orchestra of the school and entry is by audition open to all experienced violin, viola, cello, and double bass players. Specific instrumental techniques, ensemble skills, theoretical literacy, and historical awareness develop through the performance of a variety of orchestral literature from the Romantic period to the present. Students should be able to demonstrate a variety of “off the string” bow strokes.

**Music Theory, Composition & Technology**

Course Code: HS7105

Duration: Year

Prerequisites: Teacher placement.

Credits: 1.0

Students will compose music using Ableton and Logic-Pro software. Students will examine relevant music theory and musical styles, applying the socio-cultural influences of that style to their compositions.

**Guitar 1**

Course Code: HS6026

Duration: Year

Prerequisites: None. Guitar 1 can be taken more than once.

Credits: 1.0

This is an introductory course dealing with the techniques and styles of guitar playing. Students will have hands-on experience with chords, plucking, and reading notes as well as tablature. Studies will be done through a variety of styles of music, from classical / flamenco to folk and rock and roll.

**Guitar 2**

Course Code: HS6027

Duration: Year

Prerequisites: Guitar 1 or prior private lessons required for this course.

Guitar 2 can be taken more than once.

Credits: 1.0

This course builds on the techniques learned in the Guitar 1 class. Students will have hands-on experience with more advanced chord progressions, strumming patterns, and note/tablature reading. In addition, students will gain experience in a variety of finger picking styles and open tunings. Studies will be done through a variety of styles of music, from classical/flamenco to folk and rock and roll.

**IB Music SL/HL Y1-Y2**

Course Codes: HS6111 (SL Y1); HS6121 (SL Y2); HS6131 (HL Y1); HS6141 (HL Y2)

Duration: 2 years

Prerequisites: Prior knowledge of music performance, theory and styles

Credits: 1.0

IB Music is a project-based course that examines music through the holistic tripartite lenses of Perform, Explore and Experiment. Projects use all three components with differing emphases, engaging with music through understanding, making and creating. Students engage with music on personal, local and global levels, and examine four differing aspects of music, examining topics that allow for connections with a variety of musical stimuli. Additionally, Higher Level students will engage in a long-term project to prepare a multimedia presentation based on that long-term project.

**Higher Level** coursework: HL students answer a further question on the listening paper and must create and present a solo performance.

**Introduction to Theatre**

Course Code: HS6029

Duration: Year

Prerequisites: None

Credits: 1.0

As a set of staged practices rich with social context, theater has sought to document, engage, and affect communities. This course introduces and explores theater from page to stage as a live performing art. Topics include the relationship between theater and society (historical and contemporary), dramatic structure, theatrical representation, and the crafts of theater artists such as directors, designers, playwrights, and actors. Students will engage with each other on stage through performance exercises and explore storytelling through theatre design elements.

**Advanced Theatre Arts**

Course Code: HS6030

Duration: Year

Prerequisites: None

Credits: 1.0

Advanced Theatre Arts provides for the continued growth and development of the students' acting, artistic, and technical skills through a hands-on approach to theatre. Students will perform, direct, and be technically involved in class experiences and performances. This course will emphasize artistic perception and creative expression, and will promote understanding of aesthetics, historical and cultural awareness, and the interconnections of the arts and other disciplines. Through exploring theatre and its many styles and conventions, students will grow in their ability to comprehend the world and communicate with others.

**Audio Production**

Course Codes: HS6034A (Semester 1); HS6034B (Semester 2)

Duration: Semester

Prerequisites: None

Credits: 0.5

This course will explore the multi-faceted world of the music industry by providing students the basic knowledge, training and technical skills necessary to operate the equipment required to produce a finished audio product in both studio situations and live performance. Through both theory and practice students will learn what it means to produce a variety of styles of music from recording, mastering to publishing and promotion. This course may be repeated for credit.



By: Mandy Wang

**Dance 1-2**

Course Codes: HS7010 and HS7071  
 Duration: 0.5 or 1 semester  
 Prerequisites: None  
 Credits: 0.5 credit or 1 year: 1 credit (Performing Arts elective or PE credit)

Dance is a course designed for any male or female who would like to use the assets of dance to improve physical fitness, to increase talents in athletics, and to develop the ability to dance either for fun or as a performer. This course combines dance exercises, dance technique, and dance choreography. The class is designed to improve posture, strength, flexibility, endurance, agility, balance, and choreographic and improvisational techniques. Students will experience various types of dance including ballet, modern, jazz, hip-hop, Broadway, and some elements of tap, social, and folk dance and they will incorporate what they have learned into creative dance choreography. Students will also learn to evaluate dance and make aesthetic decisions in regards to creativity. Students will apply appropriate injury prevention techniques and will learn aspects of dance history as well.

**IB Theatre SL/HL Y1-Y2**

Course Codes: HS6112 (SL Y1); HS6122 (SL Y2); HS6132 (HL Y1); HS6142 (HL Y2)  
 Duration: Two years  
 Prerequisites: One year of drama or theatre is recommended.  
 Credits: 2.0

In the IB Theatre course students will explore theatre practices from Western and non-Western traditions and cultures. Students are encouraged to experience and participate in a wide and varied range of theatre activities, which include devising, performing, designing, directing, observing and reflecting on a range of different performance styles. Throughout the course students will develop academic skills appropriate for the study and understanding of theatre. They will also develop the confidence to explore and experiment – individually and collaboratively – on innovative projects that challenge established notions of theatre. Theatre is an ever-evolving art form, which reflects our ever-changing society. While year one of the course gives students a preparatory experience of

the different assessment tasks, year two gives them the opportunity to choose more independently their focus for these tasks. By the completion of the course students will have created a collaborative theatre project, a director’s notebook, and will have presented a solo performance informed by a theatre theorist.

**Higher Level Coursework:** The Higher Level Students engage in one extra unit, a research presentation based on a theatrical style of their own choosing.

**IB Dance SL/HL Y1-Y2**

Course Codes: HS7013, HS7023, HS7033, HS7043  
 Duration: 2 years  
 Prerequisites: Dance 2 or permission from the teacher.

The IB dance course is for students to delve deeper into the art form of dance through performance, creative and analytical skills. The course focuses on the composition, performance and analysis of dance, or “expressive movement,” which is practised amongst peoples of various backgrounds, and for a variety of purposes, throughout the world. Students create, participate in, and reflect upon dance forms and styles from a range of cultures and traditions, both familiar and unfamiliar. IB Dance embraces a variety of dance traditions and dance cultures, both current and past, while also encouraging students to look towards the future through the lens of dance.

Performance, creative and analytical skills are developed through the creation and performance of dance and through research and writing assignments. Students of IB dance will partake in physical technical training, dance history, composition and analysis of famous works. Participants in the course are expected to have taken Dance I and II or have equivalent dance training outside of SAS. Proof of dance training for the latter must be demonstrated in an audition/interview.

**Introduction to Physical Computing**

Course Code: HS7018  
 Duration: Year  
 Prerequisites: None  
 Credits: 1.0

Physical computing refers to the creation of devices that utilize electronics, mechanical components and computer logic to sense and respond to the surrounding world. This year-long course is designed around fun, hands-on activities and projects that challenge students to design, build and test solutions within specified design parameters. Students will develop essential 21st century skills, including authentic problem solving, rapid prototyping, adaptability and resilience. This multi-disciplined course allows students to learn to program, work with microcontrollers, use a range of Maker Space tools and techniques (including 3D printing and laser cutting) and implement Design Thinking, all in one subject! Students will not demonstrate their learning through exams, but rather through demonstrating competencies in the products they create and the processes they use to develop them. No previous experience is required or expected.

**Introduction to Robotics**

Course Code: HS8011  
 Duration: Year  
 Prerequisites: None  
 Credits: 1.0

Robots are becoming an increasingly impactful part of our world as automation changes the landscape of work and personal life. An understanding of how robots function, and how they are made, is therefore becoming increasingly important. In this course students will work to design, build and test robots to perform a variety of tasks. As students engage in a variety of challenges they will be developing not only their designing, building and programming skills but also collaborative skills that are crucial to any future career path. Students will consider:

- How do electronics, mechanical engineering and programming work together to create solutions to real world situations?
- What are my unique skills and passions, and how might they contribute to a successful robot?
- How do we use a design process to develop the best solution we can make?
- How do we deal with and learn from different viewpoints, setbacks and challenges that we face as we develop a solution to a problem?

In addition to designing and creating robots students will also gain exposure to robotics in the real world by exploring current research, robotics in the news and robotics competitions.

**Advanced Physical Computing**

Course Code: HS7028  
 Duration: Year  
 Prerequisites: Intro to Physical Computing  
 Credits: 1.0

The Advanced Physical Computing course is designed for students that have either completed the SAS introductory course or displayed aptitude in the fields of electronics and computer science.

The aims of this course are to:

- foster a passion for digital electronics and hardware design
- develop excellent Physical Computing skills and understanding of fundamental concepts

- develop a robust approach to Design Thinking
- be able to collaborate and communicate effectively in a range of scenarios

Students will learn to navigate the unique challenges presented by rapid prototyping, both individually and as part of a team. They will become very proficient in electronics, hardware design, 3D modelling and use a range of fabrication tools, including 3D printing and laser cutting.

In the first semester students will be working with Arduino (Uno R4 WiFi and Mega variants). In Semester 2 we switch to the Raspberry Pi for application of machine learning and computer vision. This course also leverages our community partners for AI and Inclusive Design units.

**Web Design & Virtual Reality**

Course Code: HS8009  
 Duration: Year  
 Prerequisites: None  
 Credits: 1.0

The Web Design course is designed for complete beginners with no previous background in computer science. The course is highly visual, dynamic, and interactive, making it engaging for new students. In today’s world, web pages are the most common medium for sharing ideas and information. Learning to design websites is an incredibly useful skill for any career path. The Web Design course is a project-based course that teaches students how to build their own web pages. Students will learn the languages HTML, CSS & Bootstrap, and will create their own live homepages to serve as portfolios of their creations. By the end of this course, students will be able to explain how web pages are developed and viewed on the Internet, analyze and fix errors in existing websites, and create their very own multi page websites.

Students will learn the foundations of user interface design, rapid prototyping and user testing, and will work together to create professional, mobile responsive websites. Virtual Reality is added onto existing HTML skills to introduce students to the basics of building virtual reality worlds using HTML and the A-Frame JavaScript library. In this course, students will learn how to make virtual reality worlds with shapes, animation, and interactions in A-Frame. Students will be able to view and share their creations in a VR device.

**Game Design and Development**

Course Code: HS8403  
 Duration: Year  
 Prerequisites: None  
 Credits: 1.0

Digital Game Development is a year-long course designed for complete beginners with no previous background in computer science. The course is highly visual, dynamic and interactive, making it engaging for new coders. This Game Development course is predominantly project-based, however students will concurrently develop their JavaScript programming skills via the excellent CodeHS web app. Students should expect to apply themselves in this aspect of the course, as a sound understanding of programming principles is essential in game development. After we have iterated through a number of small game development tasks, students will then design and develop a complete 2D game using Construct 3 and JavaScript. Along the way, students will also get to play games, analyze them through a technical lens and understand the principles of good game design. We will also explore the gaming industry at large and the impact of video games on society.

**APPLIED ARTS COURSES**

**Applied Arts Department Flow Chart**

Students in Grade 9-12 may take:





**PHYSICAL/HEALTH EDUCATION COURSES**

**Physical And Health Education Department Flow Chart**

Grade 9 students will take:

Physical & Health Education 1

Grade 10 students will take:

Physical & Health Education 2

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

PE 3:  
Personal Fitness  
(semester course)

PE 3:  
Swimming & Water  
Safety Instructor  
(semester course)

PE 3:  
Lifeguarding  
(semester course)

**Legend**  
■ SAS course

**Physical & Health Education 1**

Course Code: HS7000  
Duration: Year  
Prerequisites: None  
Credits: 1.0

The PHE I course at Shanghai American School aims to foster a desire for lifelong fitness and health. This is done through a skills based program aimed at teaching students how to play a number of popular sports, alongside an introduction to health-related fitness. Within this, a strong emphasis is also placed on daily effort and participation.

Physical Education units include both team and individual activities including fitness, aquatics, basketball, badminton and soccer. Students are assessed against the SHAPE America standards, which SAS has adopted in an effort to provide the students with a guaranteed and viable curriculum designed around their health, well-being and longevity in physical activity.

The Health element of the course is designed to educate students in sexual health, self-esteem, values, decision-making skills, and advocacy. In accordance with their multiple intelligences, students are offered a variety of means by which to present their knowledge and understanding of course work.

**Physical & Health Education 2**

Course Code: HS7001  
Duration: Year  
Prerequisites: Physical & Health Education 1  
Credits: 1.0

The PHE II course at Shanghai American School continues to build upon previous learning and prepare students for life after PHE. The focus in Grade 10 is more on the theoretical side of both sport and fitness.

Students are encouraged to use advanced strategies and tactics in game based activities, and apply them both in open and closed tasks. In fitness they set personal goals aimed at improving and maintaining an aspect of their health in order to add context to their learning. They then design individualized programs using apps and websites, as they add meaning through real-life learning, and are assessed against the SHAPE America standards.

The Health element of the course builds upon what they learned in Grade 9 and once again adds context by narrowing its focus towards aspects of adolescence which the students feel are most important to them. Students are surveyed in order to find out what they feel affects them both inside and outside of school to facilitate this. Compulsory drug and alcohol education is then intertwined with their chosen topics, and the program is geared towards their needs to prepare them for Grades 11 & 12, and their college years.

**PE 3 – Personal Fitness**

Course Code: HS7002  
Duration: Semester  
Prerequisites: Physical & Health Education 2 or equivalent  
Credits: 0.5

This class is designed to help students achieve their goals in sport or advanced fitness. It is based on functional fitness tailored to the specific needs of each student. Training is progressive and includes core, functional, cardio, and sports-specific type training. The course begins with a fitness assessment unit where students will write personal goals for exercise and nutrition. Students will then keep journals as they design and implement their own personal fitness and nutrition plan based on their fitness test results.

Students will explore current topics in weight training and personal fitness and how to apply these to their own personal fitness programs and to the personal training of others. Students will be involved in learning elements of personal training and taking a leadership role with their fitness knowledge.



By: Mandy Wang

**PE 3 – Swimming & Water Safety Instructor**

Course Code: HS7006  
 Duration: Semester  
 Prerequisites: Physical & Health Education II or equivalent  
 The prerequisites for entry in the water safety instructor course are:

- Be at least 16 years of age by the last scheduled session of the instructor course;
- Demonstrate swimming skills by swimming the following strokes with good form: front crawl, back crawl, breaststroke, elementary backstroke, sidestroke, butterfly, back float 1 minute and tread water for 1 minute. If you are a little weak in your stroke there is time to improved your skills and technique.

Credits: 0.5  
 This course is designed for students who have completed the PHE graduation requirement and would like to continue to develop their knowledge and skills in swimming and swim instruction. On completion, students will be swimming and water safety instructors. To successfully complete the instructor course:

- Successfully complete all practice-teaching assignments.
- Pass preparatory quizzes and the final written exam.

Students must demonstrate that they are mature and responsible in and around the aquatic environment.

**PE 3 – Lifeguarding**

Course Code: HS7007  
 Duration: Semester  
 Prerequisites: Physical & Health Education II or equivalent Physical & Health Education I & II or equivalent; be at least 15 years of age by the last scheduled session of the course; swim 500 yards continuously as follows: 200 yards front crawl using rhythmic breathing, 100 yards breaststroke and 200 yards of front crawl and/or breaststroke. Swim 20 yards using front crawl or breaststroke, surface dive to a depth of 7-10 feet, retrieve a 10 pounds/4.5 kg object, return to the surface and swim 20 yards back to the starting point with the object within a time of 1:40.00. If you are not swim fit at the start of the course you will have 3 weeks to complete the swimming prerequisite.  
 Credits: 0.5

The course teaches candidates the skills and knowledge needed to prevent and respond to aquatic emergencies. It will prepare students to recognize and respond quickly and effectively to emergencies,

prevent drowning and injuries, and administer first aid, CPR/AED. The course requires a reasonably strong swimming ability equivalent to our middle or upper group levels in swimming in PE.

Students must demonstrate that they are mature and responsible. This course leads to certification for Life-guarding, First Aid and CPR/AED, which is valid for 2 calendar years from the date of course completion.

To successfully complete the lifeguard course the student must: participate in all activities, successfully perform the required skills, complete 6 skill scenarios, pass quizzes and pass written exams. Students must also demonstrate that they are mature and responsible in and around the aquatic environment.

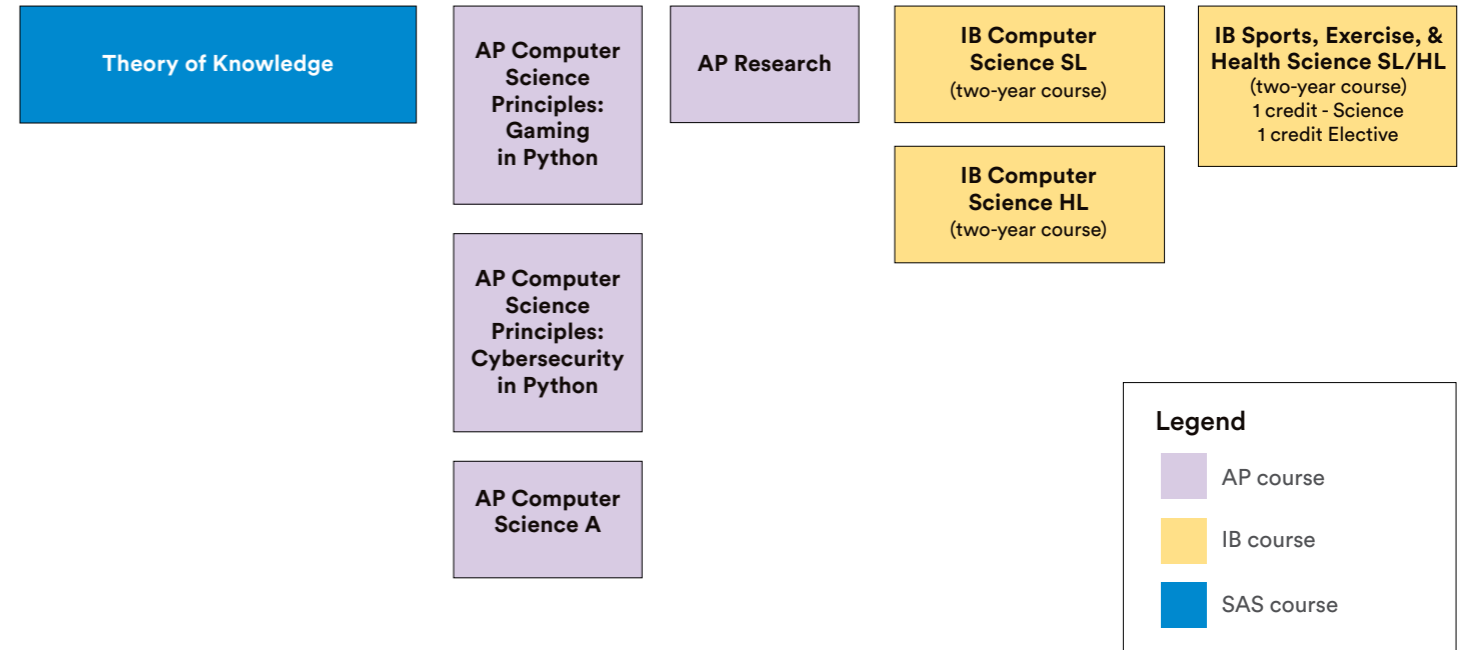
**Dance 1-2**

Course Codes: HS7010 and HS7071  
 Duration: 0.5 or 1 semester  
 Prerequisites: None  
 Credits: 0.5 credit or 1 year: 1 credit (Performing Arts elective or PE credit)

Dance is a course designed for any male or female who would like to use the assets of dance to improve physical fitness, to increase talents in athletics, and to develop the ability to dance either for fun or as a performer. This course combines dance exercises, dance technique, and dance choreography. The class is designed to improve posture, strength, flexibility, endurance, agility, balance, and choreographic and improvisational techniques. Students will experience various types of dance including ballet, modern, jazz, hip-hop, Broadway, and some elements of tap, social, and folk dance and they will incorporate what they have learned into creative dance choreography. Students will also learn to evaluate dance and make aesthetic decisions in regards to creativity. Students will apply appropriate injury prevention techniques and will learn aspects of dance history as well. This course can be counted towards a PHE graduation requirement in exceptional circumstances and with prior approval..

**ELECTIVE COURSES**

Students may choose any of the courses below based on meeting prerequisites:



By: Victoria Yu



### Theory of Knowledge

Course Codes: HS8101 (Y1 – grade 11 students only),  
HS8102 (Y2 – grade 12 students only)

Duration: Year  
Credits: 1.0

Theory of Knowledge (TOK) is a course about critical thinking and inquiring into the process of knowing, rather than about learning a specific body of knowledge. It is a required core course for the IB diploma and is also available for non-diploma students. The TOK course examines how we know what we claim to know. It does this by encouraging students to analyze knowledge claims and explore knowledge questions. The most central of these is “How do we know?”, while other questions include: What counts as evidence for X?; How do we judge which is the best model of Y? and What does theory Z mean in the real world? Through discussions of these and other questions, students gain greater awareness of their personal and ideological assumptions, they develop an appreciation of the diversity and richness of cultural perspectives, and they reflect critically on diverse Ways of Knowing and on Areas of Knowledge.

**Note that this course runs during the second semester of grade 11 and the first semester of grade 12. It is expected that students will take both semesters. The external IB assessments consist of 1600-word essay & one oral presentation, and take place during the grade 12 semester.**

### AAP Research

Course Code: HS8400  
Duration: Year  
Prerequisites: AP Capstone Seminar  
Credits: 1.0

AP Research allows students to deeply explore an academic topic, problem, or issue of individual interest. Through this exploration, students design, plan, and conduct a year long mentored, research-based investigation to address a specific question. In this course, students further develop the skills acquired in the AP Seminar course by learning about and understanding research methods; employing ethical research practices, and accessing, analyzing, and synthesizing information as they address a research question. All students enrolled in an AP subject must sit the external exam at the end of the school year.

### AP Computer Science A

Course Code: HS8201  
Duration: Year  
Prerequisites: Algebra II/Trigonometry  
Credits: 1.0

The goals of an AP course in computer science are comparable to those in the introductory sequence of courses for computer science majors offered in college and university computer science departments.

It is not expected, however, that all students in an AP Computer Science course will major in computer science at the university level. An AP Computer Science course is intended to serve both as introductory course for computer science majors and as a course for people who will major in other disciplines that require significant involvement with technology. All students enrolled in an AP subject must sit the external exam at the end of the school year.

### AP Computer Science Principles: Gaming in Python

Course Code: HS8204  
Duration: Year  
Credits: 1.0

AP Computer Science Principles introduces students to the central ideas of computer science, instilling the ideas and practices of computational thinking and inviting students to understand how computing changes the world. This rigorous course promotes deep learning of computational content, develops computational thinking skills, and engages students in the creative aspects of the field. The AP Computer Science Principles course teaches the concepts and computational thinking practices central to the discipline of computer science — and is organized around the investigation of seven topics, all of which are fundamental principles of computing and STEM (science, technology, engineering, mathematics) careers.

Students who take the AP Computer Science Principles course will develop a range of skills vital to success in subsequent college courses, such as using computational tools to analyze and study data and working with large data sets to analyze, visualize, and draw conclusions from trends. They will also develop effective communication and collaboration skills, working individually and collaboratively to solve problems, and discussing and writing about the importance of these problems and the impacts to their community, society, and the world.

### AP Computer Science Principles: Cybersecurity in Python.

Course Code: HS8204  
Duration: Year  
Credits: 1.0

AP Computer Science Principles in Cybersecurity introduces students to the central ideas of computer science, instilling the ideas and practices of computational thinking and inviting students to understand how computing changes the world. This Cybersecurity course promotes deep learning of computational content, develops computational thinking skills, and engages students in the fields of:

- Information Security
- Data Science
- Machine Learning
- Data Encryption
- Steganography/Data-hiding
- Image Filters
- Information Security
- Internet & Network Security Risk
- CyberEthics

The AP Computer Science Principles course teaches the concepts and computational thinking practices central to the discipline of computer science — and is organized around the investigation of seven topics, all of which are fundamental principles of computing and STEM (science, technology, engineering, mathematics) careers.

Students who take the AP Computer Science Principles course will develop a range of skills vital to success in subsequent college courses, such as using computational tools to analyze and study data and working with large data sets to analyze, visualize, and draw conclusions from trends. They will also develop effective

communication and collaboration skills, working individually and collaboratively to solve problems, and discussing and writing about the importance of these problems and the impacts to their community, society, and the world.

### IB Computer Science SL/HL Y1-Y2

Course Codes: HS8115 (SL Y1); HS8125 (SI Y2); HS8135 (HL Y1), HS8145 (HL Y2)  
Duration: Two years  
Credits: 2.0

The IB computer science course helps students become aware of how computer scientists work and communicate with each other and with other stakeholders in the successful development and implementation of IT solutions. While the methodology used to solve problems in computer science may take a wide variety of forms, the group 4 computer science course emphasizes the need for both a theoretical and practical approach. Students acquire an understanding of the fundamental concepts of computational thinking and of how computers and other digital devices operate, and learn the skills necessary to create computer programs using the Java programming language. During the course students 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. Students are assessed internally through a software design and creation project and externally through a written exam.

**Higher Level Coursework:** Students taking IB Computer Science at the HL level will explore a number of higher level programming concepts and skills including recursive algorithms, the creation and use of abstract data structures, systems resource management, and control systems.

### IB Sports, Exercise, & Health Science SL Y1-Y2

Course Codes: 7030 (Y1), 7031 (Y2)  
Prerequisites: Physical & Health Education II  
Duration: Two years  
Credits: 1.0 Science (Y1), 1.0 Elective (Y2)

This two-year course aims to introduce students to some of the scientific components that make up the study of sport, exercise, and health. The diploma program course in Sports, Exercise, and Health Science involves the study of the science that underpins physical performance and provides the opportunity to apply these principles.

As stated in the IB guide, this course incorporates the traditional disciplines of anatomy and physiology, biomechanics, psychology, and nutrition, which are studied in the context of sport, exercise, and health. Students will cover both core and option topics and carry out practical (experimental) investigations in both laboratory and field settings. This will provide an opportunity to acquire the knowledge and understanding necessary to apply scientific principles and critically analyze human performance. Where relevant, the course will address issues of internationalism and ethics by considering sport, exercise, and health relative to the individual and in a global context.

**Higher Level Coursework:** Students at HL are required to study additional higher level (AHL) material, conduct extra hours in the lab, and cover further HL topics within the options. The distinction between SL and HL is one of breadth and depth. Additional units include further anatomy; the endocrine system; fatigue; friction and drag; skill acquisition and analysis; genetics and athletic performance, and exercise and immunity.



By: Grace Sun

**LEARNING SUPPORT**

Student may be placed into the following class:

**Learning Support**

**Learning Support**

Course Code: HS8901

Prerequisites: Grade 9, 10, 11, & 12 students by placement

Credits: 0

The Learning Support (LS) program provides opportunities for students with learning differences to experience academic success. Through a combination of skills-based and course-specific support, the program contributes to each student's academic and personal growth. Students in the LS program may receive push-in and/or pull-out learning support as well as accommodations for learning and assessment. The program focuses on learning strategies that will contribute to each student's academic and personal growth.

**ENGLISH AS AN ADDITIONAL LANGUAGE (EAL)**

Grade 9 Student may be placed into the following class:

**English 9: Sheltered Immersion EAL Course**

**English as an Additional Language (EAL) at Shanghai American School**

Our students come from a variety of language backgrounds. Some may need support in building academic English proficiency which will be determined through language proficiency testing and a review of previous school records. All students, however, are immersed in a rigorous college-preparatory academic curriculum.

SAS is committed to additive bilingualism (maintaining home languages while developing English language proficiency). It is our expectation that our EAL students will successfully participate in the SAS learning community, have complete access to our entire curriculum, experience fully the social benefits of being with their peers, and also receive support specific to their language acquisition needs.

**EAL Support**

Students will have a certified EAL teacher available to support them during general supervised study hall.

**EAL Plus (EAL+) Support**

Ninth grade students who are identified as needing more support (called EAL +) will receive EAL support during their English 9 and Asian History courses. English 9 is taught in a sheltered immersion model. A certified EAL teacher will work with the subject teachers in Asian history. Students will also have a certified EAL teacher available to them during general supervised study hall.

**ONLINE LEARNING**

Grade 11/12 may enroll in the following online learning options:


**Global Online Academy**

**Pamoja Education**

**Virtual High School**

**Legend**

 Pamoja IB online courses

 VHS online courses



SAS is proud to offer even broader curriculum opportunities to our students.

Where a clear need exists we may be able to provide IB online courses. These online courses are available in the first instance to IB Diploma students. While studying online is an academically respected option, it may not suit all students. Course tuition fees will be paid by SAS.

The online IB courses will be offered through Pamoja, an approved provider of IB courses online. You can find out more about Pamoja on their website: <http://www.pamojaeducation.com>

Why would an IB student take a course online?

- The student's subject choices do not quite match the master schedule. Occasionally there are scheduling conflicts, and rather than constraining a student to make a second choice, online could be an option.
- If there were only a small amount of students wanting to do a course, and it was not offered at SAS.
- Other extenuating circumstances, including students transferring part way through the diploma.

**Courses offered by Pamoja:**

- IB Mandarin ab initio
- IB French ab initio
- IB Business & Management HL
- IB Business & Management SL
- IB Information Technology in a Global Society HL
- IB Information Technology in a Global Society SL
- IB Philosophy SL





### GOA students are modern learners

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

As GOA learners, our students also develop a specific set of skills, skills that might not be exercised as often in a bricks-and-mortar environment. Based on our research, student surveys, and feedback from our faculty, we have identified the following six core competencies

that our students develop in practical, hands-on ways, no matter which GOA course they take:

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

Students will need to complete an application from the counseling office and return it. Once they are approved, students will select course preferences (first choice, second choice, etc.) for first semester and second semester. Seats for GOA courses are limited. Mr. Mike McAvoy, Puxi HS GOA site coordinator, will make the final approval for all GOA course requests.

Students may view the catalog on the GOA website. (<https://globalonlineacademy.org/>)



SAS students in grades 11 and 12 may request to take an online course from the Virtual High School (VHS) for SAS credit. These courses will be taken entirely online from a non-SAS teacher. Courses offered by VHS include AP and regular courses. Many VHS courses are offered for one semester while AP classes are offered for a full year. You can peruse the courses available in the VHS Course Catalog at <https://www.vhslearning.org>

SAS students may take a maximum of seven courses in any semester, which can include one VHS course per semester. The grade for the VHS course will appear on the student's SAS report card and transcript and will be calculated as part of their grade point average. There is no additional cost for an approved SAS student to take a VHS course. Students who are interested in taking a VHS course should review all the relevant information on the Virtual High School site and should then meet with their guidance counselor to discuss the implications of taking a VHS course. Students who, after meeting with their counselor, would like to request to take an online VHS course should complete the VHS application form (available in the Counseling Office). The completed application should be submitted to the student's counselor with their course selection form at the regular due date for course selections. Seats for VHS courses are limited. Mr. Mike McAvoy, Puxi HS VHS site coordinator, will make the final approval for all VHS course requests.

Priority for VHS courses will be given to students with schedule conflicts.

If you are interested in taking an online course, please review the VHS Course Catalog (<https://www.vhslearning.org>) and carefully decide which courses you might like to take. If you have any questions about the VHS program at SAS, please contact your counselor.

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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。



### Puxi Campus

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[www.saschina.org](http://www.saschina.org)

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

SHANGHAI AMERICAN SCHOOL