## HIIHH SGHOOL PROGRAM PLANNING GUIDE

## 2024-25

## USING YOUR PROGRAM PLANNING GUIDE

At Singapore American School, we believe that every student is unique. With access to over 180 collegepreparatory, support, and college-level courses, SAS students can pursue pathways that meet their diverse needs and interests. We are committed to assisting students with developing programs of study that meet their academic and college goals, lead to a healthy lifestyle, and afford ample opportunities for participation in meaningful activities. This guide provides information about the courses offered along with information on how to select and complete the online registration process.

This guide also contains information about the minimum SAS graduation requirements, the credits recommended by colleges, and the wide range of academic opportunities available at our school. As students begin choosing courses for next year and beyond, keep in mind that students will perform best when a program is selected that includes courses that are personally interesting and at an appropriate level of challenge.

Current SAS students are asked to carefully choose courses each spring for both semesters of the following school year. Students who are new to SAS will meet with a counselor to select courses after enrollment. All students and families are responsible for taking the time to fully understand what a course will cover, whether there are any prerequisites, and whether or not there are any expectations beyond what might be considered "normal" for a course, such as additional labs, rehearsals, research, or readings.

All members of the SAS faculty are available to assist students and families as courses are selected for the next academic year. Please feel free to contact us. We look forward to another fantastic school year!

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## NOTEWORTHY IN 2O24-25

The 2024-25 school year will bring some changes to Singapore American School. We are excited to offer a few new courses and additional learning options for students. While details regarding many of these changes are included in other sections of this guide, the following are some of the highlights.

## NEW COURSES FOR 2024-25

- AT African American Studies (Social Studies Department)

In line with our commitment to prepare students for the futures they will encounter, the social studies department is excited to launch a new course in the 2024-2025 school year: AT African American Studies. African American history has played a very important role in the history of the United States, and the course will significantly deepen students' understanding of US history.

The course will explore the diverse contributions and achievements of Black communities in the United States within the broader context of Africa and the African diaspora. The course will help students examine vital questions about the causes and impacts of racism and inequality in the United States and about efforts to combat racial inequality. Our alumni have named these as gaps in our high school curriculum, and this course will help close these gaps and help SAS students navigate complex racial issues and conversations in their post-secondary experiences.

AT African American Studies, a project-based, interdisciplinary course that examines the diversity of African American experiences through direct encounters with authentic and varied sources, allows students to dive deeply into the historical and present-day experiences of African Americans. Given the alignment of the course to CollegeBoard, students will be strongly encouraged to submit their culminating project work to the CollegeBoard and sit for the new AP African-American Studies exam in May for advanced placement credit. Additionally, this course will meet US history graduation requirements.

- Artificial Intelligence I (Technology, Computer Science, \& Robotics Department)

This semester-long course will combine computational thinking with philosophical inquiry to offer students a comprehensive introduction to Artificial Intelligence (Al). Python programming will be the foundation as students explore Al from both practical and ethical standpoints. Additionally, it fosters social and ethical computing awareness, preparing students for responsible Al use in an evolving society.

## ADDITIONAL UPDATES FOR 2024-25 AND BEYOND

## Impact of the SAS Curriculum Review Cycle

SAS continually engages in review and reflection of our various curriculum and programs. Over the last two years, schoolwide reviews of World Languages, College Counseling, and Technology, Computer Science, and Robotics (TCR) programming, were conducted. We formed student, faculty, and parent focus groups to support and strengthen this work, and to align our practices with our beliefs as a community.

Additionally, the Mathematics, Social Studies and Personal Academic Counseling departments continue to implement the recommendations from their deep-dive reviews. These departments are engaged in targeted professional learning to ensure that our renewal recommendations are realized. Additionally, the Learning Support and Math departments both continue to delve deeper into the findings and action plans that resulted from curricular reviews in the 2021-22 school year. Teacher leaders, PLC Coaches, and specialists ensure that the outcomes of the review are realized for our school community Preschool-12 over the course of this school year.

We highlight these curricular reviews in our Program Planning Guide as the outcomes of this school year's work may guide additional improvement efforts within our Social Studies, Personal Academic Counseling, Learning Support, Math, World Languages, College Counseling, and TCR departments.

## Mathematics Pathways Update: New and Anticipated courses for 2024-25 \& Beyond

As part of the implementation of the 2020-21 Math Curriculum Review, SAS has engaged multiple stakeholders, including students, parents and educators to review our grades 6-12 math pathways. The goal has been to create options for students that challenge them appropriately and that provide possibilities that suit their mathematical aspirations and interests, all in a way that validates their choices and centers student wellbeing. We want to ensure that students in high school will have more flexible opportunities over their four years to transition to different levels and types of math courses in order to best match their growth as mathematical learners.

Starting in the 2024-25 school year, the high school will begin the implementation of a new math pathway sequence. Leveraging the schoolwide Illustrative Math curriculum, our high school mathematics program will transition from a traditional, separate course approach (Algebra I/Geometry/Algebrall/ Trigonometry) to an integrated approach. The integrated courses allow for students to have a strong foundation of Algebra, to see the connections in mathematics, and to learn the essential understandings they will need to enroll in advanced courses later in their high school years. Additionally, this approach provides opportunities for students to enter different levels of math at different times and creates a more coherent vertical alignment, as SAS's elementary and middle schools use an integrated approach.

Given the focus on supporting student wellbeing through increased access and flexibility, while still challenging students appropriately, the new design allows for students to progress through the course sequence in a way that no longer requires the need for validation exams or summer courses. Students will have access to progress to any level of course in multiple ways provided they demonstrate the prerequisite conceptual understandings.

The new high school math pathway will be implemented over a three year period beginning the 202425 school year with the launch of two new courses: Integrated Math I and Integrated Math II with Trigonometry. In 2025-26, the Integrated Math II and Integrated Math III w/ Precalculus courses will come online. Finally, the full model will be in place in 2026-27 when the final class, Integrated Math III, will be added to the complete new course sequence. Students in the Class of 2025, 2026, and 2027, and students in the Class of 2028 who take Geometry in grade 9, will be able to continue with the math pathway sequence that was in place in 2023-24. With these courses coming online, the courses of Algebra 1, Geometry, Algebra II, Algebra2/Trigonometry, Accelerated Math I and Accelerated Math II will phase out over the next three years. Please see below for the new math pathway course sequence that will be in place following the three year implementation roll out.

## NEW MATH PATHWAY

Will be implemented over a 3 year period
with full implementation in 2026-2027


## Technology, Computer Science \& Robotics (TCR) Update: New Department for 2024-25 \& Beyond

In 2022-23, SAS engaged multiple stakeholders, including students, parents and educators to review our Technology, Computer Science, \& Robotics (TCR) pathways across all divisions with the goal of creating a high quality aligned K-12 TCR pathway.

The review was conducted through the lens of STEM approaches. We identified that the term "STEM" does not signify a course, a program, or a discipline but instead is a teaching approach used to design real world, student-centered learning experiences that incorporates opportunities for students to develop learning aspirations and apply knowledge and skills from multiple disciplines. The STEM approach is the collective ideal state for disciplines like computer science and robotics engineering.

Through the lens of the STEM approach several recommendations emerged from the review that will impact how our courses are taught including:

- Publish a TCR philosophy statement that serves as a guiding document for computer science and robotics engineering.
- Publish and use the STEM approach and characteristics as a framework to guide decisions for TCR courses, units, infrastructure, sustainability and design, delivery, and evaluation of learning experiences.
- Identify and implement a common method for delivering a STEM approach to ensure that students experience well-designed, authentic, and high-quality TCR learning experiences.
- Adopt and use K-12 Computer Science (CSTA) and K-12 Robotics Engineering (NGSS) Standards and Identify Power Standards.

In order to support the implementation of these recommendations, the High School will be creating a TCR department starting from the 2024-25 school year. The TCR courses have formerly been housed under the Technology, Electives and Capstone (TEC) department which will be discontinued at the end of 2023-24. Non-TCR courses formerly housed under the TEC department have been reassigned to other relevant departments or will stand alone in the Program Planning Guide.

Details of reassigned courses:

- Journalism: Yearbook and Graphic Design can be found under the Visual \& Performing Arts department.
- AT Seminar and AT Research \& Catalyst can be found under the Social Studies department.
- Independent Study and GOA Online Learning courses can be found under Flexible Learning Options.
- The SAS Catalyst Project can be found under the new Catalyst section of the PPG which includes details on all 5 options for students to fulfill this graduation requirement.


## World Language Pathways Update

Grounded in our P-12 World Language curriculum review and our SAS culture of possibilities, we are excited to announce that starting in 2025-26, Advanced 1 and Advanced 2 in the high school Chinese pathways will become Advanced Topics (AT) courses. The CollegeBoard and the American Council for Foreign Language Teaching place college-level recognition when a student can consistently function in all four skills (listening, reading, speaking, and writing) at a strong intermediate-high proficiency. Given that, we believe that our students are prepared to engage in a variety of subject areas and interests in Chinese at the college level. We will share more information with our community as we develop these interest-based courses in preparation for the 2025-2026 school year.

## GENERAL INFORMATION

## HIGH SCHOOL DALLY SCHEDULE

Our high school follows a 4 day block schedule rotation. This means that students meet with each of their teachers every other day. Additionally, students meet with their advisory twice a week and each day they also have a lunch block.

## COURSE SELECTION AND CORRECTIONS

Please select courses carefully! It is important for students to engage in thoughtful planning of which courses they would like to take in alignment with their four-year plan. To do this well, it is important for students and parents to learn about the variety of courses and work together with their counselor in the spring to solidify next year's course schedule for both semesters. Since returning SAS students have opportunities each spring to thoughtfully select and adjust their course requests, there should be minimal course corrections at the start of each semester. Course corrections should only be made for necessary reasons. Please note the additional facts related to course corrections:

- Course correction requests should primarily be for where there is an error (i.e. missing course, duplicate class) or a level misplacement.
- Corrections are subject to availability in classes. For this reason, it is important that students choose courses in the spring that they intend to remain in for the entire school year.
- Seniors must list the courses for the entire senior year when they apply to most colleges. Should a correction in a senior's second semester courses need to be made, colleges must be notified of those changes. Should it appear that a student is moving to an easier load in the final semester, it can reduce the chances of admission. Seniors are advised to select their courses carefully for the entire school year and plan to remain in them.
- The Student Handbook has a full explanation of SAS schedule correction practices.


## ADVISORY

The high school advisory program aims to ensure every student feels known, cared for, connected, and supported. Advisories focus on social-emotional learning by engaging students in activities to develop their self-management, self-awareness, social awareness, relationship, and responsible decisionmaking skills. Advisory strengthens students' sense of identity and belonging, and creates a space anchored in inclusion, respect, and equity where students feel safe to express themselves authentically.

Each advisory is composed of approximately 10-12 students in the same grade who are assigned to a faculty advisor during their first year in high school at SAS. In most cases, students will stay with the same advisor until they leave SAS. Advisory groups meet twice per week for 30 minutes.

Advisory meetings focus on improving students' interpersonal and intrapersonal skills, their cultural competence, and their character. These meetings are structured around the content and behaviors needed to best ensure the social/emotional health of all students; improve academic success; and prepare students for the inevitability of change in their lives, including the transitions to high school, college, and adulthood.

The Advisory program strives to create an atmosphere of trust where students feel safe to discuss a wide range of academic and personal matters in a setting that helps to balance the rigorous academic demands of the SAS experience.

## FREQUENTLY ASKED QUESTIONS

## Where can I learn more about the Advanced Studies program?

The Advanced Studies section within this guide will help to answer some of your questions about the variety of college level learning opportunities that SAS has to offer. We also encourage students to bring questions to their high school counselors. They will gladly help provide clarity and are eager to help any family to plan a course of study with their child.

## How many AP courses can my child take?

To ensure students enroll in a balanced selection of courses, the school has capped the total number of Advanced Placement credits that a student may earn. Students may earn up to seven (7.0) AP credits during their high school careers.

## What does the AP credit limit mean for access to AP exams?

In 2024-25, we will offer a combined total of over 40 Advanced Placement (AP) and Advanced Topic (AT) courses within the Advanced Studies program.

It is possible for students who plan appropriately to take more than seven AP examinations - in some instances, as many as 15 AP examinations.

There are a number of AT courses that permit enrolled students to sit the associated AP exam:

- AT Environmental Science \& Fieldwork (AP Environmental Science exam)
- AT Seminar (AP Seminar exam)
- AT Research \& Catalyst (AP Research exam)
- AT English: Literature (AP English Literature exam)
- AT African American Studies (AP African American Studies exam)

We also offer two year-long credit AP courses that provide students access to two separate AP exams per course. These courses provide one credit and two exams:

- The AP Economics course (AP Macroeconomics exam and the AP Microeconomics exam)
- The AP Physics C course (AP Physics C: Electricity \& Magnetism exam and the AP Physics C: Mechanics exam)

Finally, we offer two half-credit semester-long AP courses. Each of these semesters offers access to one exam per course:

- AP Government and Politics: Comparative (AP Government and Politics: Comparative exam)
- AP Government and Politics: US (AP Gov \& Politics: US exam)


## GRADUATION REQUIREMENTS

Required Courses in

## Specific Academic Areas

English
Mathematics
Science
Social Studies*
World Language**
Visual/Performing Arts
Physical Education
Health Education
Catalyst Project
Minimum Total Credits***

Minimum
Credits
4.0
2.0
2.0
2.0
**
1.0
1.5
0.5

Clarifying Details:
**Language: Two years of study of the same foreign language (e.g., Chinese, French, or Spanish at the Novice, Intermediate level) or an equivalent proficiency in another language is required.
${ }^{* * *}$ Minimum credits : The minimum credits listed above are the absolute minimum number required to earn an SAS diploma. Completing the minimum credits would not necessarily be sufficient for admission to university. Focus should be on the "Recommended for College" column.

Interim : - Students must participate in an Interim Semester course each year they are at SAS.

- One Interim service course ( 0.25 credit) is required.


## YEARLY PLANNER

The Yearly Planner allows students to begin to map out courses aligned to their interests year by year or over the course of four years. For support in how to use the Yearly Planner, please watch this short video tutorial.

See Appendix I for a full-size print version of the Yearly Planner.


## COURSE SELECTION INSTRUCTIONS

## BEFORE REQUESTING COURSES

After reviewing the information in this guide, please use the High School Yearly Planner to develop a high school plan of study. Make certain that the minimum graduation requirements are fulfilled, but remember they are just that-minimum requirements. College-bound students graduate with significantly more than the minimum credits. Students should enroll in a challenging academic program in which they can be successful while also having time to fully immerse themselves in their SAS high school experience.

## HOW TO REQUEST COURSES

Teachers and counselors are happy to answer any questions about this request process or any of the SAS courses.

Students can log in to PowerSchool and click the class registration icon to open the course selection screen. Access to this page is only available during the registration period in the spring. Follow the on-screen instructions to select courses for next year. Note that all courses are available throughout the registration period: seats are not allocated until after the process ends.

Click a subject area to see the available courses. The list of available courses is based upon the courses the student has already completed, the prerequisites that have been met, or recommendations entered by current teachers. New students who recently joined our school and have no SAS course history may be missing prerequisites; in this case, please see your PAC counselor (grade 9 \& 10) or college counselor (grades $11 \& 12$ ) and they can support you in selecting your courses.

Students going into grade 9 and 10 must choose seven courses per semester. Students going into grade 11 and 12 may select either six or seven classes per semester; they may not register for fewer than six.

Once the correct number of courses has been entered, click submit. The course requests will be displayed. Until the request period ends, students can go back and review or change course requests.

## REQUESTING A PREREQUISITE OVERRIDE

In exceptional circumstances for some courses in the areas of English and Computer Science, students who do not meet a course grade or specific course prerequisite in may approach their teachers and department coordinator for consideration of a prerequisite override. The criteria to consider and approve an override is established by the department and is noted in the respective section of the PPG.

## REVIEWING GRADUATION CREDITS

After submitting course requests, a summary of courses will be displayed. Students can then check graduation progress by clicking the "view graduation progress link". These charts combine all credits: those that have been completed, those that are in-progress this semester, and those that have been requested for next year. The top graph shows progress toward meeting minimum SAS graduation requirements, and the bottom one shows progress toward fulfilling typical college preparatory expectations.

## ENGLISH



## Notes:

* Courses offered alternating years.
${ }^{+}$Fulfills both the English and Social Studies requirements.

The English curriculum focuses on the areas of reading, writing, speaking and listening, research, and language. Each area will be assessed every year in various ways, and students' skills will be revisited and refined over the course of the four-year program. Students must take an English class every semester they attend SAS. All ninth-grade students will study English in Humanities 9, while tenthgrade students must take English 10 or American Studies. 11th- and 12th-grade students may opt to take any of the junior/senior course optoins or Advanced Studies course options. Please note that enrolling in some of these courses requires students to first meet stated prerequisites.

## Humanities 9

$\begin{array}{ll}\text { ID: } 41004 & \text { Credit: English/World History (2) } \\ \text { Grade: } 9 & \text { Length: Year }\end{array}$
Prerequisite: None
Note: All grade 9 students will be enrolled in the Humanities 9 course to meet their English and Social Studies credit requirements.

Humanities 9 is a year-long survey course that focuses on building a strong foundation of skills and empowering students to make meaningful connections across the English and Social Studies disciplines. Using an inquiry framework, Humanities 9 students will explore literature and world history from various cultural perspectives while learning to read analytically, write effectively, and speak and listen thoughtfully. Over the course of the year, students will write for a variety of purposes (to analyze, inform, reflect, argue, and narrate) and engage with a variety of texts (including novels, plays, poems, short stories, historical primary sources, oral histories, and museum artifacts). In strengthening their historical thinking skills, students will learn rigorous research methods and source evaluation skills, create recursive compelling questions to guide their historical inquiries, analyze historical continuities and changes, and explore complex and interacting factors that have influenced the perspectives of people. Students will also practice and strengthen their discussion and presentation skills to build and share their understandings. Finally, they'll refine their knowledge of grammar and vocabulary, honing the language tools they will use to express themselves purposefully and effectively.

## American Studies

ID: 41014 Credit: English/US History (2)
Grade: 10 Length: Year
Prerequisite: None
Note: American Studies is a combined daily English 10 and US History \& Government course.
This course meets the U.S. History requirement for U.S. citizens.

American Studies is a thematic study of the American experience through the lenses of history, economics, civics, and literature, with a focus on skills. Through the thematic units, students explore critical issues, individuals, and turning points in the history of the United States of America. Students analyze the extent to which ideologies, people, literature, and events developed and shaped both American history and its contemporary issues. Students think
critically and make thoughtful connections as they draw on a variety of resources to understand the American experience. This interdisciplinary course meets every day and provides both an English 10 and a U.S. History \& Government credit. Throughout the year, students develop their writing in a variety of genres (e.g., argument, narrative, analysis, synthesis, and informative essays), responding insightfully to both literature and history. They also pursue course-related areas of interest for their research projects. Accordingly, students must critically read a variety of nonfiction, fiction, films, and poetry reflecting the American experience. In addition to their in-class reading, students are encouraged to read widely outside of class in order to make connections and build their reading skills. The course requires participation in class discussions, collaborative work in small groups, and several presentations. Language and mechanics instruction focuses on students' writing needs.

## English 10

| ID: 41013 | Credit: English |
| :--- | :--- |
| Grade: 10 | Length: Year |
| Prerequisite: | None |

English 10 is primarily a survey of American Literature in which students are asked to think critically and reflect on essential questions throughout the year: What are my values and where do they come from? How do the works we've read and the characters we've met cast a light on societies represented in the literature and reflect our own? Instruction and assignments are focused on improving all aspects of language: reading, writing, listening, and speaking. Students read a variety of classic and contemporary fiction, nonfiction, drama, and poetry, along with regular independent reading, with the goal of moving from comprehension into critical reading. The course emphasizes the discussion of literature to further students' understanding of themes that surface through the reading. Students build their writing skills through writing and revising informative, narrative, and argumentative pieces. Instruction on language usage and mechanics focuses on students identifying and correcting problems evident in their writing and development of sophisticated sentence fluency.

## JUNIOR/SENIOR OPTIONS

The junior and senior options continue SAS's college preparatory English sequence. These courses cover diverse bodies of literature from various periods and cultures. All of the courses develop writing, reading, speaking, and listening skills, as described below. Please note that some options are offered on a two-year, rotating basis; see course descriptions for details.

Writing: Students will compose a variety of writing assignments, such as personal essays, literary analyses, compare and contrast essays, reviews, journal entries, and character sketches. They will be encouraged to develop an authentic voice and sense of audience. Students will revise pieces of writing, concentrating on content and organization, and edit to improve diction and mechanics. Students will participate in peer critiquing and editing.

Reading and Viewing: Students will read and view a significant body of literature appropriate to the focus of the course.

Speaking and Listening: Students will speak in a variety of contexts: speeches and oral presentations, large and small group discussions, dramatic readings, and/or readers' theater activities.

## JUNIOR/SENIOR SEMESTER I OPTIONS

## Asian Literature: An East-West Perspective

ID: $41019 \quad$ Credit: English
Grade: 11-12 Length: Semester
Prerequisite: None
This semester-long course allows students to explore novels, poetry, and pop culture texts-like anime, K-dramas, Hong Kong Film, and other media-- created and produced in Asia or by Asian authors abroad. The course includes local Singaporean voices, as well as those from the broader Asian continent and will examine how narrative styles and cultural values represent and reflect each other. While many of the texts focus on Singapore, China, Japan, India, or South Korea, there is space for students to bring their own backgrounds and identities into text selection. Students will engage in literature circles, discussing books that they've chosen based on their interests. They will read Singaporean poetry, and write some of their own, inspired by their immediate surroundings, and sharpening their analysis skills. Finally, they will conclude the semester by selecting a modern, Asian pop culture text to research and analyze. This inquiry
project allows them to investigate Asian pop culture, their own media use and tastes, and Asia's cultural impact on the modern world. This is an engaging, relevant, and choice-driven course that features texts and voices that students don't often see in their English courses.

## Creative Writing

ID: $41042 \quad$ Credit: English
Grade: 11-12 Length: Semester
Prerequisite: None
This semester-long course is designed for students who wish to explore creative writing, to develop an individual writing voice, and to learn first-hand how creative writers work. Using a workshop format, students will hone their collaboration skills as they survey specific forms of creative writing (including narrative and poetry), develop a peer community of writers to critique and support each other, and create an individual portfolio of creative work. Students will have opportunities to submit their works to outside publications and share their work with the school community. This course serves as an introduction to creative writing that sets up students to succeed in the AT Writing Workshop and Publication class, should they choose to pursue further studies in creative writing.

## Literature \& the Imagination (Science Fiction)

ID: 41011 Credit: English
Grade: 11-12 Length: Semester
Prerequisite: None
Through the reading and viewing of both classic and contemporary science fiction, students in this semester-long course will examine the philosophical (ethical), scientific, and political ideas developed in this genre. Key ideas include: the ethics of science and the responsibility of the scientist, the conflict between humans and technology, humans' relationship to nature, the individual against society, humankind meeting alien species, social problems highlighted in science fiction literature and film, and how science fiction questions what it means to be human. Consequently students will analyze and explore both written text and film via essays, close reading commentaries, and discussions. Students will also write their own science fiction stories. The variety of science fiction writers and directors studied includes (but is not limited to) H.G. Wells, Mary Shelley, Ray Bradbury, Octavia Butler, Ridley Scott, and Denis Villeneuve.

# JUNIOR/SENIOR SEMESTER II OPTIONS 

## British Literature:The World of Shakespeare

ID: 41006 Credit: English
Grade: 11-12 Length: Semester
Prerequisite: None
Note: Offered in 2024-25. May not be offered in 2025-2026.

This semester-long course is designed for students who would like to read Shakespeare's plays and poems closely, critically, and creatively. Students will develop close reading and viewing skills, explore Shakespeare's language, and experiment with themes and literary features in critical and creative writing, discussion, and informal performance. Study will focus on craft, meaning, inquiry, and both individual and collaborative exploration of Shakespeare's sonnets and plays (comedy, history, and tragedy).

## Contemporary American Literature

ID: $41008 \quad$ Credit: English
Grade: 11-12 Length: Semester
Prerequisite: None
Note: Not offered in 2024-25. May be offered in 2025-26.

This semester-long course explores American literature from 1980 through the present, including short fiction, novels, and drama. Students will understand modern American culture through literature and discuss the perspectives, voices, and values that shape modern American identity. Skills practiced in the course include researched arguments, literary analysis responses, creative responses to reading, literature circle discussions, and presentations.

## Studies in Satire

ID: $41022 \quad$ Credit: English
Grade: 11-12 Length: Semester
Prerequisite: None
This semester-long course is designed for students who wish to explore and analyze a variety of satire through the ages to examine how the genre works. Students will begin by exploring the basic concepts of satire as a literary genre. After establishing a critical lens through which to view satire, students will study a variety of satirical texts ranging from classical to more contemporary examples. The texts studied will include essays, short video clips, music, and full-length films. Throughout the semester, students will focus on developing the following skills: explanatory writing, presentation, argument writing, and close reading. Students will even get a chance to try
their hand at writing their own satire. Overall, the course seeks to enhance students' critical thinking skills by closely analyzing the criticisms inherent in works of satire.

## World Literature: Myths \& Monsters

ID: $41017 \quad$ Credit: English
Grade: 11-12 Length: Semester

## Prerequisite: None

Monsters and heroes are figures as old as literature itself; across world cultures and throughout history, humans have told stories about good and evil, epic quests, and grotesque creatures of nightmare. This course explores some of the most enduring mythical archetypes through ancient and modern literary texts. Through our reading, writing, and discussion, we will ask: What makes a myth? How do we define heroes and monsters? Good and evil? How does modern literature trouble traditional literary archetypes? And what do our monsters and heroes say about us? We will examine novels, epic stories, and films that feature classic and contemporary visions of heroes, witches, demons, ogres and perhaps the most frightening monster of all: humankind. Students should expect to work both independently and with peer groups to examine readings and explore ideas. The course will require development of skills in literary analysis, close reading of challenging texts, discussion and exploration of philosophical ideas connected to the literature, as well as research and presentation of information.

## JUNIOR/SENIOR FULL-YEAR OPTIONS

## Reading, Writing, \& Publishing in a Digital World

ID: $41025 \quad$ Credit: English
Grade: 11-12 Length: Year
Prerequisite: None
In this year-long course, students will examine how digital media has reconstructed the ways we read, write, speak, and think. We now wield incredible power when publishing descriptions, expositions, arguments, and stories for a wide, often-online audience-and bear great personal responsibility while doing so. Essential questions for this course include "Why do we acquire and publish digital content?" and "Who is our audience?" To help investigate these questions and others, students will consider intellectual histories of media and will read and respond to classic and contemporary literature regarding how personal, social, and national narratives
evolve through digital publication. Also, students will learn to read critically, evaluate, and write through lenses of digital mediation, exploring and engaging with an array of media genres and forms. In addition, throughout the year, students will learn oral communication skills to be used in their published multimedia projects.

## ADVANCED STUDIES COURSE OPTIONS

## AP English Language \& Composition

ID: 41028 Credit: English
Grade: 11-12 Length: Year
Prerequisite: None for rising 11th and 12th grade students. Rising 10th grade students with a semester I grade of A+ in Humanities 9 may seek an override from their current Humanities English teacher.

Note: This course has an additional grade point weighting of 0.5 .

AP English Language \& Composition is a universitylevel course in which students read and write for a variety of rhetorical purposes. Over the course of the year, students will learn skills of rhetorical analysis, argument, and argumentative synthesis. Students will study a variety of non-fiction texts of varying lengths and rhetorical situations, as well as one dystopian novel, requiring students to respond to both current controversies and enduring philosophical questions. In addition to preparing for the AP exam tasks (timed writing and multiple choice questions), students will participate in collaborative discussions, create video projects, and craft processed pieces of writing to develop their voice and style. Please note that successful completion of the course requires a much greater effort and is significantly more demanding than English 10. Students best suited to this course are avid, proficient readers attuned to current events and interested in understanding the power of language to shape our identities, our perceptions, and our world. Students will be prepared for and will be strongly encouraged to sit for the AP exam in May.

## AT English: Literature

ID: $41047 \quad$ Credit: English<br>Grade: 11-12 Length: Year

Prerequisite: A Semester I grade of $B$ or higher in English 10/ American Studies is required to select this course in 11th grade.

Note: The Advanced Topic (AT) designation indicates a course is at university level, putting it at or above the level of a traditional Advanced Placement (AP) course. This course has an additional grade point weighting of 0.5 .

AT English: Literature is for avid readers interested in pursuing deeper and more creative ways to read. The course will build a critical reading community that discusses, questions, shares, and creates. There will also be opportunities to make choices and decisions about texts and assessments. The central question of the course is: How does engaging with a text through multiple modalities deepen understanding and relevance? Integral to the course are long-term reading and reinvention projects where students will respond to and reinvent a text through collaboration, creation and performance. Students will also learn to interpret texts through conventional academic lenses; academic discussion; reading analysis; and writing to analyze, explain, propose, and reflect. The course has a demanding reading, writing and creating workload, and is meant for students who are interested in challenging literary texts combined with a cognitive mentorship approach in which the teacher learns and creates alongside the students as a member of the reading community.

AT English: Nonfiction \& Rhetoric<br>ID: $41048 \quad$ Credit: English<br>Grade: 11-12 Length: Year

Prerequisite: In order to be admitted into this advanced course for grades 11-12, students must submit a portfolio of expository and persuasive writing prior to March 1, 2024. This portfolio must demonstrate a passion for the subject, evidence of craft, knowledge of standard written English, evidence of close reading, and potential for growth. The portfolio will be assessed by a committee of English teachers, and applicants will be informed of their status prior to course registration. Please see your English teacher and the application form for more details.

Note: The Advanced Topic (AT) designation indicates a course is at university level, putting it at or above the level of a traditional Advanced Placement (AP) course. This course has an additional grade point weighting of 0.5 .

AT Nonfiction and Rhetoric is a college-level, student-driven course that builds on the skills taught in AP Language and Composition. Students will write a range of thoughtful and provocative nonfiction pieces-- touching on topics such as culture, social justice, politics, the environment, economics, and language-reflecting their identities, interests, and cultural and linguistic backgrounds. The student-writers decide what they write (content) and how they write it (form), and they must collaborate on teams who innovate together, reach consensus and support each other's growth. Students engage with their audience regularly through publication on a class-created website and through community events. At the end of the year, they will also publish a printed compilation of essays, which will be available to the SAS community. The course will have elements of discussion, speechwriting, performance, editorial writing, rhetorical analysis, and group work. AP Language and Composition, while not a required prerequisite, is highly encouraged, as the writing tasks require a high level of independence and peer collaboration; therefore, students who have not completed AP Language and Composition may need to complete supplementary work to catch up on necessary content and skills. Students are highly encouraged to attend a weekend-long writing retreat at the start of the year to encourage the development of the class's writing community; fees apply.

# AT English: Writing Workshop \& Publication 

ID: 41046 Credit: English<br>Grade: 11-12 Length: Year

Prerequisite: In order to be admitted into this advanced course for grades 11-12, students must submit a portfolio of creative writing pieces by March 1, 2024. This portfolio must demonstrate a passion for writing as well as evidence of craft, knowledge of standard written English, potential for growth, and pride in the work. The portfolio will be assessed by a committee of English teachers, and applicants will be informed of their status prior to course registration. Please see your English teacher and the application form for more details.

Note: The Advanced Topic (AT) designation indicates a course is at university level, putting it at or above the level of a traditional Advanced Placement (AP) course. This course has an additional grade point weighting of 0.5 .

Designed for students who already have a regular writing practice in any creative genre and can demonstrate a passion for creative writing, this course is an inquiry into the world of writing and publication, culminating in publication of an anthology of works composed, edited, designed, and marketed by students. Students will learn creativity and collaboration skills as a backdrop to their focus on writing. Skills developed include idea generation, giving and responding to peer feedback, intensive revision, and purposeful reflection. Students will have the choice to learn editing, design, marketing, or events planning on smaller teams. The course features workshops to improve drafting and editing skills, study and analysis of writing that focuses on process and audience, and encounters with visiting local and international authors. The course demands rigorous independent work and responsibility to meet community expectations and deadlines. Students are highly encouraged to attend a weekend-long writing retreat at the start of the year to encourage the development of the class's writing community; fees apply.

## SOCIALSTUDIES



* U.S. History credit
** Courses offered alternating years (see note section in course description)
${ }^{+}$Fulfills both the English and Social Studies requirement at this grade level. (E) Elective credit



## U.S. HISTORY OPTIONS

All U.S. citizens (not dual citizens) must earn one credit in U.S. History. The courses listed below meet this requirement. Please see their descriptions in this section of the PPG for more information on each course.


Social Studies offerings are designed to allow students to develop and demonstrate character, collaboration, communication, creativity, critical thinking, cultural competence, and core knowledge. Toward this end, courses are built around the College, Career, and Civic Life (C3) framework and National Council for Social Studies (NCSS) standards. Students will develop questions, apply disciplinary tools, evaluate evidence, and take action as they communicate conclusions. All ninth grade students will study world history in the Humanities 9 program. Tenth through twelfth grade students have a wide variety of choices in the disciplines of history, government, economics, business, geography, psychology, and philosophy, as well as the opportunity to take Advanced Studies courses in many of those disciplines. Credits earned in Social Studies fulfill the department specific minimum graduation requirements (except in the case of Business, Personal Finance, AT Entrepreneurship, AT Seminar, and AT Research and Catalyst which serve as elective credit).

## SOCIAL STUDIES COURSE OPTIONS

## Humanities 9

ID: $41004 \quad$ Credit: English/World History (2) Grade: 9 Length: Year

Prerequisite: None
Note: All grade 9 students will be enrolled in the Humanities 9 course to meet their English and Social Studies credit requirements.

Humanities 9 is a year-long survey course that focuses on building a strong foundation of skills and empowering students to make meaningful connections across the English and Social Studies disciplines. Using an inquiry framework, Humanities 9 students will explore literature and world history from various cultural perspectives while learning to read analytically, write effectively, and speak and listen thoughtfully. Over the course of the year, students will write for a variety of purposes (to analyze, inform, reflect, argue, and narrate) and engage with a variety of texts (including novels, plays, poems, short stories, historical primary sources, oral histories, and museum artifacts). In strengthening their historical thinking skills, students will learn rigorous research methods and source evaluation skills, create recursive compelling questions to guide their historical inquiries, analyze historical continuities and changes, and explore complex and interacting factors that have influenced the perspectives of people. Students will also practice and strengthen their discussion and presentation skills to build and share their understandings. Finally, they'll refine their knowledge of grammar and vocabulary, honing the language tools they will use to express themselves purposefully and effectively.

## American Studies (English 10/U.S. History)

$\begin{array}{ll}\text { ID: } 41014 & \text { Credit: English/US History (2) } \\ \text { Grade: } 10 & \text { Length: Year }\end{array}$
Prerequisite: None
Note: American Studies is a combined double-block English 10 and US History \& Government course. This course meets the U.S. History requirement for U.S. citizens.

American Studies is a thematic study of the American experience through the lenses of history, economics, civics, and literature, with a focus on skills. Through the thematic units, students explore critical issues, individuals, and turning points in the history of the United States of America. Students analyze the extent to which ideologies, people, literature, and events
developed and shaped both American history and its contemporary issues. Students think critically and make thoughtful connections as they draw on a variety of resources to understand the American experience. This interdisciplinary course meets every day and provides both an English 10 and a U.S. History \& Government credit. Throughout the year, students develop their writing in a variety of genres (e.g., argument, narrative, analysis, synthesis, and informative essays), responding insightfully to both literature and history. They also pursue course-related areas of interest for their research projects. Accordingly, students must critically read a variety of nonfiction, fiction, films, and poetry reflecting the American experience. In addition to their in-class reading, students are encouraged to read widely outside of class in order to make connections and build their reading skills. The course requires participation in class discussions, collaborative work in small groups, and several presentations. Language and mechanics instruction focuses on students' writing needs.

## U.S. History \& Government

ID: 42012 Credit: US History Grade: 10-12 Length: Year

## Prerequisite: None

Note: This course meets the U.S. History requirement for U.S. citizens.
U.S. History \& Government enables students to make thoughtful judgments on issues of the past, present, and future. Students will analyze events in U.S. History for their significance and relevance to today. We will foster independent learning, and student voice and choice. The students will study the history of the United States as experienced by a variety of different groups of people, many of whom have been traditionally marginalized in the teaching of this course. Students will be assessed on the acquisition of core knowledge, their ability to apply knowledge, and the connections they make between material they learn and the United States today. Students will demonstrate their knowledge and skills in a number of different ways, with inquiry projects playing a significant role in each quarter of the year.

## ADDITIONAL SOCIAL STUDIES SEMESTER COURSE OFFERINGS (GRADE 10-12)

Note that a number of the following courses are offered in alternating years. As with all courses, if a course is offered for registration but does not receive a sufficient number of requests, administration may choose to remove it from the offerings for that year after students have submitted their requests.

## Modern History of Singapore

ID: $42014 \quad$ Credit: Social Studies
Grade: 10-12 Length: Semester

## Prerequisite: None

Note: Will be offered in 2024-25. May not be offered in 2025-26.

This course provides an overview of the events and forces that have created the modern nation of Singapore, a country many of us call home. Using a variety of media, including graphic texts, students will consider the common cultural and historical background of Singapore, as well as the impact of geography, location, and people on its history. The role of foreign empires and colonial powers will be examined, along with the forces at work and the paths followed, on the road to independence. Emphasis will also be placed on Singapore today, including the perennial topics of race and trade. Students will examine modern Singaporean society, culture, economy, and politics through simulations, debates, independent research, interactive lectures, field trips, and visits from Singaporean writers and artists.

## Modern Philosophy

ID: $42025 \quad$ Credit: Social Studies
Grade: 10-12 Length: Semester
Prerequisite: None
Note: Will not be offered in 2024-25. May be offered in 2025-26.

Modern Philosophy will require students to examine concepts such as logic, ethics, reality, and happiness to construct arguments answering questions such as: "What are the questions, and who has the answers?", "How are modern ethical dilemmas in current events 'solved' using ethics?", "How are social justice movements such as justice in health care, justice in protest movements, and the problems of climate change considered using philosophical concepts?", and "What makes us happy?" Students will read and analyze against the roots of philosophical thinking and then
move to a study of multicultural philosophers' engagement with life's most interesting ethical dilemmas. Students will be asked to come prepared to have intellectual conversations, engage in inquiry and develop creative projects to synthesize sources from media to experts. The purpose of Modern Philosophy is to provide students with the fundamental knowledge and skills necessary to critically examine contemporary ethical and philosophical situations. This course promotes independent thinking and encourages critical examinations of philosophical writings.

## Law \& Justice

ID: 42024 Credit: Social Studies
Grade: 10-12 Length: Semester
Prerequisite: None
Note: Will be offered in 2024-25. May not be offered in 2025-26.

This course has been developed to promote a cross-cultural understanding of the law. Students will compare the legal systems of the United States and Singapore. Law \& Justice is intended to provide SAS students with the ability to understand the U.S. government, individual rights, laws and legal disputes, as well as those of our host country. Students will be encouraged to engage deeply with social policy guided by significant themes in jurisprudence and theories of justice, including individual liberty, privacy, democracy, and the relationship between the citizen and the state. We will accomplish this through case studies, and mock trials of landmark and contemporary conflicts. Students who take part in Law \& Justice will discuss and write about current and controversial issues, engage in simulations of democratic practices, receive pertinent civic instruction, interact with experienced lawyers and jurists, and learn how to formulate arguments in support of policies they advocate. Students will gain a practical understanding of law and the legal system, historical and current controversies, and how this system might relate to their everyday lives.

## Economics

ID: $42008 \quad$ Credit: Social Studies
Grade: 10-12 Length: Semester
Prerequisite: None
Note: This course is not available for students who have already completed advanced studies in economics. Will be offered in 2024-25. May not be offered in 2025-26.

Economics will provide students insight into ways people and nations function economically, i.e., how they make a living. Basic economic concepts
including wealth, utility, capital, labor, supply and demand, profit and competition, production, distribution, exchange, consumption, and the factors affecting each area are studied. Monetary and fiscal policies are examined in the light of contemporary economics, both national and international. Students will study major recessions to understand fiscal policy, the public debt, and ways banks create money.

Behavioral Economics \& Game Theory<br>ID: $42023 \quad$ Credit: Social Studies<br>Grade: 10-12 Length: Semester<br>Prerequisite: None

Note: This course does not meet the NCAA Division I core course requirement for Social Studies. See counselor for details. Will not be offered in 2024-25. May be offered in 2025-26.
This course uses models from the disciplines of psychology and economics to encourage a logical, deductive approach to thinking, and to look at several different approaches to resolving conflicts. The major analytical models presented are derived from "game theory" and "behavioral economics". These models are used to tackle issues and problems across the entire spectrum of the social sciences. The course is largely problem centered, applying game theory tactics and skills to hypothetical situations and to case studies that come from history, current world events, and the immediate world around us. Individual analysis, small group discussion, and class discussion are common formats. The final project will be a research paper applying Game Theory concepts to a 'real life' example.

## Business

ID: 46524 Credit: Elective
Grade: 10-12 Length: Semester

## Prerequisite: None

Note: Will be offered in 2024-25. May not be offered in 2025-26.

This course will explore the world of modern business through project-based learning. The course will guide students through the essential activities of an enterprise, including finance and accounting, human resources, operations, and marketing. Students will become critical thinkers, analyzing, discussing, and solving realworld business case problems. Students also improve their written and oral communication skills in authentic settings when reporting their solutions to business cases. Students will polish their technology skills by authentically using computer skills as business people would:
preparing presentations, calculating, preparing, and analyzing quantitative data in Excel, and creating marketing materials using image and video manipulation tools. The course is designed for those who would like a better understanding of the world of commerce or hope to one day join the business field.

## Personal Finance: You \& Your Money

ID: 46524 Credit: Elective
Grade: 10-12 Length: Semester
Prerequisite: None
Note: Will not be offered in 2024-25. May be offered in 2025-26.

Few high school and college graduates are financially literate when they first enter the workforce. This course gives students an advantage in the real world by developing their financial literacy. Students will learn that high salaries don't guarantee future wealth unless earnings are properly managed. Students will learn to manage their money through responsible spending and investing habits. In this course students will track their own daily spending from the first day of the class and explore the merits of careful consumption and effective investing through a series of project-based discoveries.

## Psychology

ID: 42010 Credit: Social Studies
Grade: 10-12 Length: Semester

## Prerequisite: None

Note: This course is not available for students who have already completed advanced studies in psychology. Will not be offered in 2024-25. May be offered in 2025-26.

Psychology is the study of mental processes and behavior. It is a complex subject which draws on concepts, methods and understandings from a number of different disciplines. This requires a multidisciplinary approach and the use of a variety of research techniques whilst recognising that behavior is not a static phenomenon-it is adaptive, and as the world, societies and challenges facing societies change, so does behavior. Considering this, we will examine biological, cognitive, and sociocultural approaches to understanding behavior.

## ADVANCED STUDIES COURSE OPTIONS

## AT African American Studies

ID: $42030 \quad$ Credit: US History
Grade: 10-12 Length: Year
Prerequisite: Semester I grade of B+ or higher in Humanities 9 is required to select this course in grade 10.
Note: This course meets the U.S. History graduation requirement. The Advanced Topic (AT) designation indicates a course is at university level, putting it at or above the level of a traditional Advanced Placement (AP) course. Students will have the opportunity to submit project work and sit the AP African American Studies exam in May for advanced placement credit. This course has an additional grade point weighting of 0.5.

AT African American Studies is an interdisciplinary course that examines the diversity of African American experiences through direct encounters with authentic and varied sources. Students explore key topics that extend from early African kingdoms to the ongoing challenges and achievements of contemporary movements. Given the interdisciplinary character of African American studies, students in the course will develop skills across multiple fields, with an emphasis on developing historical, literary, visual, and data analysis skills. Students will have the opportunity to engage in project work, defining and executing a research project of their choice, drawn from topics or themes in the course or from the broader field of African American studies. This course foregrounds a study of the diversity of Black communities in the United States within the broader context of Africa and the African diaspora. Students will be strongly encouraged to submit their project work to the CollegeBoard and sit the AP exam in May for advanced placement credit.

Topics that will be covered:
Origins of the African Diaspora
Freedom, Enslavement, and Resistance
The Practice of Freedom
Movements and Debate
This course is also well-suited for those students who want to go deeper into US history after completing one of our other US History Courses (AP US History, American Studies, US History).

## AP U.S. History

ID: $42036 \quad$ Credit: US History
Grade: 10-12 Length: Year
Prerequisite: Semester I grade of B+ or higher in Humanities 9 is required to select this course in grade 10.

Note: This course meets the U.S. History graduation requirement. This course has an additional grade point weighting of 0.5

This course provides students with an understanding of major themes in U.S. history, including American identity, economic and social life, political change and continuity, and the U.S. role in the world. The course is ideal for the student who has a real interest in history and who is prepared to work consistently and to go well beyond. Students are required to be internally motivated, to have good reading comprehension and analytical writing skills, to be well organized, and to be prepared to examine and think about different, often conflicting, interpretations of history. The course moves briskly, so students must be prepared to devote time daily to reading and note taking. There will be considerable inclass discussions based on assigned readings, as well as numerous interpretive essays. Students will be prepared for and strongly encouraged to sit for the AP exam in May.

## AT Historical Inquiry \& Research

ID: 42064 Credit: Social Studies
Grade: 10-12 Length: Year
Prerequisite: Semester I grade of B+ or higher in Humanities 9 is required to select this course in grade 10.

Note: The Advanced Topic (AT) designation indicates a course is at university level, putting it at or above the level of a traditional Advanced Placement (AP) course. This course has an additional grade point weighting of 0.5 .

This in-depth, focused history course fosters in students the skills that professional historians use in their practice. We begin with a brief introduction to historiography and schools of historical thought, where we will consider the scope, methods and tools, perspectives, and ethics involved in the study and creation of history. From this base, we will engage in three historical inquiries, becoming progressively more open to student choice and interest. Our first inquiry is a sourcework investigation that helps us to develop foundational skills and allows us to consider regional and local implications of history. Our second inquiry is a cross-regional exploration of a broad historical theme that develops skills around analysis, evaluation and application of
evidence. After building our skills, knowledge, and understanding as historians throughout the course, it's time for our final inquiry - a historical investigation where each student selects their own topic of specialization, and generates their own contestable question for inquiry. Throughout this process, students will produce academic works, engage with professional historians, and publish our annual SAS History Journal.

## AP U.S. Government \& Politics

ID: $42035 \quad$ Credit: Social Studies
Grade: 11-12 Length: Semester I
Prerequisite: None.
Note: This course has an additional grade point weighting of 0.5 .

AP U.S. Government and Politics provides a college-level, nonpartisan introduction to key political concepts, ideas, institutions, policies, interactions, roles, and behaviors that characterize the constitutional system and political culture of the United States. Students will study U.S. foundational documents, Supreme Court decisions, and other texts and visuals to gain an understanding of the relationships and interactions among political institutions, processes, and behaviors. They will also engage in current policy debates and electoral events, and will explore their political socialization and emerging ideology. This is usually a first semester course. Students will be prepared for and strongly encouraged to sit for the AP exam in May.

## AP Comparative Government \& Politics

ID: 42031 Credit: Social Studies
Grade: 11-12 Length: Semester II

## Prerequisite: None

Note: This course has an additional grade point weighting of 0.5 .

AP Comparative Government and Politics introduces students to the rich diversity of political life globally. The course uses a case study approach to examine the political structures; policies; and political, economic, and social challenges of six selected countries: China, Iran, Mexico, Nigeria, Russia, and the United Kingdom. Students compare the effectiveness of approaches to many global issues by examining how different governments solve similar problems. In this discussion based course, they will read and interpret data, make comparisons and applications, and develop evidence-based arguments. Throughout we will explore current policy events in our six case studies and globally. This is usually a second semester course. Students
will be prepared for and strongly encouraged to sit for the AP exam in May.

## AT Geography \& Field Research

ID: 42063 Credit: Social Studies
Grade: 10-12 Length: Year
Prerequisite: Semester I grade of B+ or higher in Humanities 9 is required to select this course in grade 10.

Note: The Advanced Topic (AT) designation indicates a course is at university level, putting it at or above the level of a traditional Advanced Placement (AP) course. This course has an additional grade point weighting of 0.5 .

Geography takes advantage of its unique position to examine relevant concepts and ideas from a wide variety of disciplines. This helps students develop an appreciation of, and a respect for, alternative approaches, viewpoints, and ideas. This course focuses on four major themes of human geography and ensures that students acquire elements of a variety of research and fieldwork methodologies. The AT Geography course embodies global and international awareness in several distinct ways. It examines key global issues and utilizes examples and detailed case studies at a variety of scales, from local to regional, and from national to international. This is an inquiry-based course that will involve fieldwork in a variety of locations in Singapore, as well as research projects on a variety of global locations and issues.

## AT Urban Studies

ID: 42060 Credit: Social Studies
Grade: 11-12 Length: Semester
Prerequisite: None
Note: The Advanced Topic (AT) designation indicates a course is at university level, putting it at or above the level of a traditional Advanced Placement (AP) course. This course has an additional grade point weighting of 0.5 .

Students will study urban development from a historical and a geographic perspective focusing on themes, trends, and challenges that have faced urban planners since the start of human urbanization. Students will engage in various interdisciplinary assignments and projects which demonstrate understanding of the key concepts, content, and skills associated with city design and analysis. Students will apply this knowledge to Singapore and look for themes and patterns related to various community stakeholders. Students will then focus on a theme of personal interest which will form the basis of a field work research paper/project. Themes could relate
to topics such as gentrification, green space, the negotiation between private and public interests, architecture, transportation, leisure and recreation, or government housing, and may focus on one specific location, such as their own neighborhood.

Following the fieldwork-based research, students will look at the main challenges and issues facing urban planners today around the world. The culminating summative project will be a research project which can take a variety of forms, but will address one of these issues. Students will also share a presentation which summarizes their research and findings. This course will involve research in the field, and will require students to visit sites in their own time, and be responsible for conducting that field research. All assessments for this course are inquiry/project-based, with no traditional 'pencil-and-paper' tests.

## AP Economics

ID: $42054 \quad$ Credit: Social Studies
Grade: 10-12 Length: Year
Prerequisite: Semester I grade of B+ or higher in Humanities 9 is required to select this course in grade 10.
Note: This course has an additional grade point weighting of 0.5 .

AP Economics is made up of two semester-length College Board AP courses - Macroeconomics and Microeconomics. Topics covered include basic concepts such as scarcity, trade-offs, and the functions of the economics system; the nature and function of product markets, including basic supply and demand theory, consumer choice theory, and pricing theory; the nature and function of factor markets, including theories of wage determination; measurement of economic performance using concepts such as gross domestic product, inflation, and unemployment; analysis of various schools of economic thought in relation to aggregate demand and aggregate supply; money and banking, including the tools of the central bank; and, finally, the usefulness of various government policies that can be applied to remedy the economic problems discussed throughout each semester. College Board offers both an AP Microeconomics and AP Macroeconomics exam. This course prepares students to take both exams in May. SAS offers two different versions of AP Economics, this course, where students proceed at the normal AP pace, and a self-paced AP Economics (42046). Students will be prepared for and strongly encouraged to sit for the AP exam in May.

## AP Economics (Self-Paced)

ID: $42046 \quad$ Credit: Social Studies
Grade: 11-12 Length: Year
Prerequisite: None.
Note: This course has an additional grade point weighting of 0.5 .

This "self-paced" AP Economics covers the same content as the more traditional AP Economics course (42045), but students have the flexibility to move faster than the normal pace of the class. Students may take assessments before the normal "due date" but may not fall behind. Students who sign up for this course will benefit from the flexibility to plan the timing of assessments themselves but should be self-directed and strong independent learners. Students will be prepared for and strongly encouraged to sit for the AP exam in May.

## AT Economics: Globalization

## ID: $42061 \quad$ Credit: Social Studies

Grade: 11-12 Length: Semester
Prerequisite: AP Economics; or a Semester I grade of A or higher in Economics.
Note: The Advanced Topic (AT) designation indicates a course is at university level, putting it at or above the level of a traditional Advanced Placement (AP) course. This course has an additional grade point weighting of 0.5 .

This course is designed to offer students an opportunity to delve deeper into the international economy than our introductory courses allow. The focus of the course is globalization (international trade and economic development). Students use the conventional models learned in previous economics classes as well as the less conventional models of behavioral economics to study economic development and growth. All students will write a research paper and work on a development problem with a local social enterprise as culminating economics projects. The latter is optional and requires out of school work. The course requires rigorous study and emphasizes in-depth research.

## AT Entrepreneurship

ID: $46560 \quad$ Credit: Elective<br>Grade: 10-12 Length: Semester

Prerequisite: Semester I grade of B+ or higher in Humanities 9 is required to select this course in grade 10.
Note: The Advanced Topic (AT) designation indicates a course is at university level, putting it at or above the level of a traditional Advanced Placement (AP) course. This course has an additional grade point weighting of 0.5

Entrepreneurship provides real world, handson learning on what it's like to actually start a company. The goal is to give students a framework to test the business model of a startup while creating all of the pressures and demands of the real world in an early stage start-up. They will learn marketing, finance, and other business disciplines, while also acquiring organizational skills such as time management and leadership development. The class is also a vehicle to develop character, intellect, and resilience in students. Students start the semester with an immediate immersion into the Lean Startup methodology adopted from University of California Berkeley and Design Thinking techniques from Stanford University. As students develop skills through working in the field, observing and interviewing to discover problems, and learning techniques for validating hypotheses, they learn by doing, through real world problems and collaborating with real entrepreneurs. Students work with carefully selected Singapore entrepreneurs, who present real and urgent business problems with hard deliverables and deadlines. Students learn processes including customer development, agile development, and rapid prototyping. Throughout the course, students will learn to problem solve, think critically, make well-informed decisions, communicate effectively, and engage in productive and successful team work. In the final portion of the course, students use everything they've learned about entrepreneurship and group work to launch their own startups. The course requires rigorous study and emphasizes in-depth research.

## AT Psychology

ID: 42062 Credit: Social Studies
Grade: 11-12 Length: Year

## Prerequisite: None.

Note: Students who have taken AP Psychology previously are not eligible to take this course. This course is aligned to the criteria for a Syracuse University psychology course (SUPA PSY 205). If students elect to earn Syracuse University credit by concurrently enrolling in SUPA PSY 205, they need to do so at the beginning of AT Psychology. Please note that there is a cost per Syracuse University credit hour that families must pay if students choose to concurrently enroll. For further information, please see the SUPA website (http://supa. syr.edu). To determine whether participation in this program is a fit for your long-term goals, please speak with your counselor.
The Advanced Topic (AT) designation indicates a course is at university level, putting it at or above the level of a traditional Advanced Placement (AP) course. This course has an additional grade point weighting of 0.5.

AT Psychology introduces students to the scientific study of human behavior and mental processes. Through examining basic theories, research discoveries, and the applied use of psychology, students will understand multiple perspectives demonstrating that, while psychology covers diverse topics they are not separate and distinct, rather they are integrated and together combine to give us the entire picture of human behavior, cognition, and emotion. Students will learn to access, critically read, and evaluate current research in the field of psychology and will conduct both individual and group research into a topic of interest, thus gaining a strong understanding of the psychological principles as applied to their lives and the world around them. They will complete the course with a strong foundation in scientific research methodology. Students in AT Psychology will have the option to take it as a dual-enrollment course with Syracuse University.

## AP CAPSTONE AND CATALYST

To receive the AP Capstone Diploma, students must successfully complete both AT Seminar and AT Research \& Catalyst. In addition, they must earn a score of 3 or higher on both the AP Seminar and AP Research exams, and earn a score of 3 or higher on four additional AP exams of their choosing. A student will typically take AT Seminar in the sophomore or junior year, followed by AT Research \& Catalyst. The AP Capstone Diploma is awarded by the College Board.

## AT Seminar

$\begin{array}{ll}\text { ID: 48520 } & \text { Credit: Elective } \\ \text { Grade: 10-12 } & \text { Length: Year }\end{array}$
Prerequisite: Semester I grade of A or higher in Humanities 9 is required to select this course in grade 10. Semester 1 grade of B+ or higher in English 10/American Studies is required to select this course in grade 11.
Note: AT Seminar requires independence, the ability to work with teams and groups, self-regulation, and time management to be successful.This course has an additional grade point weighting of 0.5 .

The AT Seminar course is an inquiry-driven course that engages students in cross-curricular conversations that explore real-world topics and issues from multiple perspectives. Students learn to collect and analyze information with accuracy and precision in order to craft and communicate evidence-based arguments both in writing and in presentations to a live audience. Students also work collaboratively; a willingness to be a team player is vital to this course as students will submit a team project to the College Board, which includes a team presentation. AT Seminar is year one of the AT Research \& Catalyst program; merging the AT Seminar/AT Research program with the Catalyst project allows students to reflect on their passions and strengths while they develop the skills that help them to think and write academically. Upon completion of the AT Seminar, students will be prepared for a research, performance, or innovation-based AT Research \& Catalyst experience the following academic year. This course has fully adopted the AP Seminar curriculum, and therefore, students will be eligible to take the AP Seminar exam in preparation for earning the AP Capstone Diploma.

## AT Research \& Catalyst

ID: $48515 \quad$ Credit: Elective
Grade: 11-12 Length: Year
Prerequisite: AT Seminar.
Note: Completing this course is one of the ways in which a student may fulfill the Catalyst graduation requirement. Like an AP course, this course has an additional grade point weighting of 0.5 .

AT Research \& Catalyst allows students to deeply explore an academic topic, problem, or issue of individual interest with the expectation of producing a university level research paper, presentation and oral defense. For example, students can dig deeper into a topic studied in an AP or AT course, work across academic areas on an interdisciplinary topic or study a new discipline of interest, perhaps one a student would like to study in college. The course begins with students developing a greater sense of self. As they explore their interests, students design, plan, and conduct qualitative and/or quantitative research and choose a methodology to address a potential research question. Ultimately, students hone in on a academic research question and work on an independent research project. Students utilize the learning aspiration as they document their processes and curate their scholarly work in a portfolio. In addition, students will be guided to operationalize their personal networks in order to establish mentorships and other forms of experiential network-based learning (collaborative research studies, internships, etc.). The course culminates in an academic paper of approximately 5000 words, an oral defense presentation of their research, and paper submission to an academic journal. This course has fully adopted the AP Research curriculum, and therefore, students will be eligible to receive AP credit and be eligible for the AP Capstone Diploma.

## MATHEMATICS

Please note that there are two pathway course sequence charts below to allow for the transition to our new SAS math pathways. The first pathways chart is for classes of 2025, 2026, and 2027. The second pathways chart is for the class of 2028 . The full new pathway course sequence chart, which a number students in the Class of 2028 may access, can be viewed in the Noteworthy section of the PPG.

CLASS OF 2025, 2026, \& 2027


Notes:
${ }^{1}$ Geometry Math Lab requires approval for enrollment.
Courses in grey indicate that the courses will not be offered in the 2024-2025 school year and beyond.

## CLASS OF 2028



## Notes:

* See the new math pathway in the Noteworthy section.

The high school mathematics program empowers students to develop agency and build positive mathematical identities by engaging in equitable, rigorous, and meaningful learning experiences. We strive to provide every student with the opportunity to develop deep mathematical understanding and experience wonder in mathematics.

All students must earn a minimum of two math credits in high school, one of which must be at the level of Geometry or higher. It is generally recommended that students take four years of mathematics in high school.

The math department embraces the use of technology, and therefore requires students to bring a CAS or non-CAS TI-Nspire calculator to each class. The CAS calculator is approved for use in the AP and SAT exams, and the non-CAS calculator is approved for use in the AP, SAT, and ACT exams. This video may be used to help you decide which calculator is right for you.

The following math department policies and practices should also be noted:
Concurrent Enrollment: When the prerequisites have been met, students in grades 10-12 may take two math courses concurrently in alignment with their four year plan. Students in grade 9 may take only one year-long math course.
Placement Options: Historically validation exams were provided to increase access to advanced level courses. Given that the new math pathway will provide increased access to advanced math courses (provided a student demonstrates the prerequisite conceptual understandings), validation exams will be offered for the last time in August 2024 for the Class of 2025, 2026, and 2027 only, and they will no longer be offered for the Class of 2028 and beyond. For the Class of 2028, should a student believe that their math course options are not at the appropriate level of challenge and they would like to explore alternative options, they should meet with their current math teacher and counselor to discuss placement.

New Student Placement: New students to SAS will be placed based on a prior school transcript review and, where necessary, the results of a placement assessment administered following admission.

Prerequisites: Students who fall below a prerequisite for a specific math class at the end of Semester I will be eligible to take their desired math class by earning the necessary grade prerequisite at the end of Semester II. Students who meet the prerequisite grade in Semester II should contact the math department chair, the guidance services coordinator, and their counselor upon receipt of semester 2 grades in early June to request the appropriate math course.

## Integrated Math I

| ID: 43052 | Credit: Math |
| :--- | :--- |
| Grade: 9 | Length: Year |

## Prerequisite: None

This course is designed for students who have mastered mathematics skills and concepts of grade 7 and 8 Common Core Math Standards. Students will deepen and extend understanding of linear relationships by contrasting them with exponential phenomena and by applying linear models to data that exhibit a linear trend. Integrated Math 1 also uses properties and theorems involving congruent figures to deepen and extend understanding of geometric knowledge. It is designed to connect the algebraic and geometric concepts using a problem-based approach. This course is the first course in a three-course Integrated Math series using the Illustrative Math curriculum and aligned to the Common Core State Standards.

## Geometry

$\begin{array}{ll}\text { ID: 43011 } & \text { Credit: Math } \\ \text { Grade: 9-12 } & \text { Length: Year }\end{array}$
Prerequisite: Completion of HS Algebra I or Meeting Expectations or above on a minimum of three standards, with no standards Below Expectations in Accelerated Math 8 (Algebral).

This course is designed for students who have successfully completed Algebra I. Students deepen their understanding of geometric relationships, moving towards formal mathematical arguments. The course includes constructions, transformations, similarity, triangles, quadrilaterals, polygons, triangle trigonometry, circles, probability, and area and volume of twoand three-dimensional figures. Coordinates, problem solving, and other elements of algebra are prevalent. This course uses the Illustrative Math curriculum and is aligned to the Common Core State Standards.

## Integrated Math II with Trigonometry

ID: $43055 \quad$ Credit: Math
Grade: 9-12 Length: Year
Prerequisite: Quarter 3 performance standards of minimum 2 Exemplaries or above and/or Quarter 4 performance standards of 3 Exemplaries or above with no standards below Meeting expectations in Accelerated Math 8 (Algebra I) or Semester I Grade of A or higher in Algebra I.

Using the Illustrative Mathematics curriculum, students will deepen and extend understanding of quadratic functions with complex roots, probability
and data, area and volume, and transformations of shapes and functions. Integrated Math 2 with Trigonometry also introduces similarity and right triangle trigonometry, which leads to the study of circles and trigonometric functions. The additional exploration of trigonometric concepts makes this course more challenging due at the prerequisite depth of conceptual understanding and fast pace to which students are required to understand concepts. This course is suitable for students who are passionate about and highly motivated by mathematics and, should it be required, are willing to devote additional time and effort to the coursework.

## Accelerated Math II

ID: $43015 \quad$ Credit: Math
Grade: 10-12 Length: Year
Prerequisite: Semester I grade of B or higher in Accelerated Math I.

Note: Will not be offered after the 2025-26 school year.
This course is the second year of the Accelerated Math I and II sequence. It is designed to serve highly motivated math students looking to access the highest level math offerings at SAS. It covers key content from Algebra II/Trigonometry and Pre-Calculus. The course aims to cover a broad range of topics and will therefore be fast paced and rigorous. After successfully completing both Accelerated Math I and II, students will be able to enter AP Calculus. On transcripts this course is identified as being equivalent to an honors level course.

## Algebra II / Trigonometry

ID: $43013 \quad$ Credit: Math
Grade: 9-12 Length: Year
Prerequisite: Semester I grade of $C$ or higher in Geometry.
Note: Will not be offered after the 2025-26 school year.
Building on work with linear, quadratic, and exponential functions in previous courses, students in Algebra 2 Trigonometry extend their repertoire of functions to include higher degree polynomials, complex numbers, rational, logarithmic, squareroot, cube- root, and trigonometric functions. Students will analyze these functions through several lenses: simplifying expressions, applying transformations, solving equations, and modeling. Students will also engage in statistical inference, focusing on analyzing data from experiments using normal distributions. This course uses the Illustrative Math curriculum and is aligned to the Common Core State Standards.

## Algebra II

ID: $43004 \quad$ Credit: Math

Grade: 10-12 Length: Year
Prerequisite: Geometry plus current math teacher's recommendation.
Note: This course is officially named Algebra II. It is only open to students who have a teacher recommendation. Most students would select Algebra II/Trig.

This course will allow students to meet the minimum prescribed levels of Algebra required by most colleges. The course is designed to support students for whom the Algebra II/Trigonometry course is not a viable option. The course will focus on the development of the student's conceptual understanding of the Algebra II topics including function theory, quadratic, polynomial, probability, and exponential and logarithmic functions. The approach used will emphasize problem solving, oral and written communication, and reasoning skills.

## Data Analytics

## ID: $43016 \quad$ Credit: Math <br> Grade: 9-12 Length: Year

Prerequisite: Successful completion of Geometry. This math course is designed for students who are interested in applying statistical models with real datasets.

The course will include applied examples of data collection, processing, representation, interpretation, analysis, and evaluation to provide students with hands-on experience and introduction to data science. Students will use a popular open source data science tool, the " $R$ " open source statistical analysis and visualization system, to aid in data management, and use worldviews concepts to contextualize the analysis of the dataset. At the end of the course, students will have had the opportunity to gain insights on data through examples, discussions, and individual projects based on student interests.

## Discrete Mathematics

ID: $43017 \quad$ Credit: Math
Grade: 9-12 Length: Year
Prerequisite: Conceptual Algebra II; or Algebra II/ Trigonometry.
This course is designed for the student who wants to continue on in mathematics and learn many real-life applications, but might not intend to pursue calculus level classes. Discrete Math students find that the topics covered in class are closely related with many things they do in other disciplines. Discrete Mathematics provides an introduction to a variety of contemporary topics that are useful in various fields such as business
and social sciences, as well as the physical and computer sciences. The topics include use of graphs to model real life applications, election theory, fair division of assets, linear programming, logic, and applications of matrices, probability and statistics. Problem based projects will be included in the class.

## Pre-Calculus with Statistics

$\begin{array}{ll}\text { ID: 43008 } & \text { Credit: Math } \\ \text { Grade: 9-12 } & \text { Length: Year }\end{array}$
Prerequisite: Semester I grade of A or higher in Algebra II; or a Semester I grade of C or higher in Algebra II/ Trigonometry.

This course focuses on further developing students' proficiency with algebra and probability, including a review of trigonometric functions, transformations, and an introduction to trigonometric identities. Students will extend their understanding of probability to include counting methods and probability distributions. Students are also introduced to the statistical analysis of the relationship between two sets of data. This course includes exploration of polynomials, rational, logarithmic, and exponential functions and provides students with a solid foundation to take AP Statistics, AT Post-Euclidean Geometry, AT Finite Math Modelling, and AP Calculus AB.

## Pre-Calculus with Parametrics

ID: $43021 \quad$ Credit: Math
Grade: 9-12 Length: Year
Prerequisite: Semester I grade of B or higher in Algebra II/Trigonometry.

This course is a prerequisite for AP Calculus BC. Typically, students will find this to be a fast- paced, more time-intensive and rigorous option than previous courses in the sequence. Students wishing to be successful in this course will need to adopt a mindset that is committed to conceptual understanding as they look to examine the common themes that link this discipline together. Topics include polynomial optimization, sequences and series, probability, analytical trigonometry, polar relationships and conic sections, rational functions, logarithmic and exponential models, and parametric equations and vectors. On transcripts this course is identified as being equivalent to an honors level course.

# ADVANCED STUDIES COURSE OPTIONS 

AP Calculus AB<br>ID: 43026 Credit: Math<br>Grade: 9-12 Length: Year

Prerequisite: Semester 1 grade of $B$ or higher in PreCalculus with Statistics. Semester 1 grade of $C$ or higher in Pre-Calculus with Parametrics or Accelerated Math II.

Note: This course has an additional grade point weighting of 0.5 .

This course covers topics typically found in a firstsemester calculus course at universities in the USA. The course covers limits, continuity, differentiation and integration, and their applications. Success in this course requires a solid Pre-Calculus background. Students will be prepared for and strongly encouraged to sit for the AP Calculus AB exam in May.

## AP Calculus BC

ID: $43032 \quad$ Credit: Math<br>Grade: 9-12 Length: Year

Prerequisite: Semester 1 grade of $B$ or higher in PreCalculus with Parametrics or in Accelerated Math II.
Note: This course has an additional grade point weighting of 0.5 .

This fast paced course covers topics usually found in the first two semesters of a first year calculus course at universities in the USA. The course covers all of the topics in AP Calculus AB: limits, continuity, differentiation and integration, and their applications. In addition, AP Calculus $B C$ includes: new integration techniques, polar, parametric and vector calculus and sequences and series, including Taylor series. Students will be prepared for and strongly encouraged to sit for the AP BC Calculus exam in May.

## AP Calculus BC (Post-AB)

| ID: 43033 | Credit: Math |
| :--- | :--- |
| Grade: 9-12 | Length: Semester |

Prerequisite: Semester I grade of B or higher in AP Calculus AB.

Note: Designed for students who have completed AP Calculus $A B$. This course has an additional grade point weighting of 0.5 .
This course is similar to a second semester calculus course in university and will review some topics from AP Calculus $A B$ such as limits, continuity, differentiation and integration. In addition, this course will introduce new integration techniques, polar, parametric and vector calculus and
sequences and series, including Taylor series. Students will be prepared for and strongly encouraged to sit for the AP Calculus BC exam in May.

## AP Statistics

$\begin{array}{ll}\text { ID: 43028 } & \text { Credit: Math } \\ \text { Grade: 9-12 } & \text { Length: Year }\end{array}$
Prerequisite: Semester 1 grade of B+ or higher in Accelerated Math I, Algebra II/Trigonometry or Data Analytics; or a Semester I grade of B or higher in PreCalculus with Statistics; or a Semester 1 grade of $C$ or higher in Pre-Calculus with Parametrics or Accelerated Math II.
Note: AP Statistics will receive an additional grade point weighting of 0.5 .

The purpose of this course is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. The four major themes are exploring data to find patterns, planning a study, exploring random phenomena using probability and simulations, and statistical inference, including confidence intervals and hypothesis testing. Students will be prepared for and strongly encouraged to sit for the AP Statistics exam in May.

## AT Finite Math Modeling

ID: $43042 \quad$ Credit: Math
Grade: 9-12 Length: Semester II
Prerequisite: Semester 1 grade of A or higher in Accelerated Math I, Algebra II/Trigonometry; or a Semester I grade of B or higher in Pre-Calculus with Statistics; or a Semester 1 grade of C or higher in PreCalculus with Parametrics Accelerated Math II.

Note: The Advanced Topic (AT) designation indicates this course is at university level, putting it at or above the level of a traditional Advanced Placement (AP) course. Like an AP course, this course has an additional grade point weighting of 0.5 .

This elective course is designed for students who seek high level applications of math to real life situations. Mathematics will be used to explain and analyze cryptography, networks, iterative processes, and scheduling. Mathematical models will be used based on matrices, modular algebra, and vertex-edge graphs. Project-based learning will be prevalent, involving real-world applications, such as bin-packing, transportation networks, encryption, and spanning trees.

AT Linear Algebra<br>ID: $43044 \quad$ Credit: Math<br>Grade: 9-12 Length: Semester

Prerequisite: Semester I grade of A or higher in AP Calculus $A B$; or Completion of $A P$ Calculus $B C$; or concurrent request with semester-long AP Calculus BC (Post-AB).
Note: The Advanced Topic (AT) designation indicates a course is at university level, putting it at or above the level of a traditional Advanced Placement (AP) course. This course has an additional grade point weighting of 0.5.

This course covers topics found in typical semesterlong linear algebra courses at universities. The course will focus on systems of linear equations and their applications, linear independence and dependence, linear transformations and their matrix representations, matrix algebra, characterizations of invertible matrices, determinants, vector spaces and subspaces, null and column spaces, and Eigenvalues and Eigenvectors. During the semester, students will do projects tied to real world applications, which may include; animation, computer graphics, animal carrying capacities, google page rankings, and transformations.

## AT Multivariable Calculus

ID: 43043 Credit: Math
Grade: 9-12 Length: Semester
Prerequisite: Completion of $A P$ Calculus $B C$; or concurrent request with semester-long AP Calculus BC (Post-AB).

Note: The Advanced Topic (AT) designation indicates this course is at university level, putting it at or above the level of a traditional Advanced Placement (AP) course. This course has an additional grade point weighting of 0.5 .

This course covers topics found in typical semester- long multivariable calculus courses at universities. The course will focus on multivariable calculus including visualizing and working with functions of several variables, vectors and vectorvalued functions, differentiating functions of several variables, gradients, partial derivatives, and multiple integration of several variables. Students will complete a group project aligning their skills to real world physical models, while presenting their findings to a group of experts and finish the semester with an individual project that will connect multivariable calculus with new contexts.

## AT Post-Euclidean Geometry

ID: $43041 \quad$ Credit: Math<br>Grade: 9-12 Length: Semester I

Prerequisite: Semester 1 grade of $A$ or higher in Accelerated Math I, Algebra II/Trigonometry; or a Semester I grade of B or higher in Pre-Calculus with Statistics; or a Semester 1 grade of $C$ or higher in Pre-Calculus with Parametrics or Accelerated Math II. Students must also have successfully completed a high school Geometry course or equivalent.
Note: The Advanced Topic (AT) designation indicates a course is at university level, putting it at or above the level of a traditional Advanced Placement (AP) course. This course has an additional grade point weighting of 0.5 .

This elective course is designed for students who seek further advanced study and applications beyond the Geometry course, involving concepts acquired in Algebra II/Trigonometry. Topics will include non-Euclidean geometries, further work with transformations and constructions, and higher level work with conic sections. Projectbased learning will be prevalent, involving realworld applications, such as the shapes of satellite dishes, origami, animation design, and the spherical geometry of the Earth.

## SCIENCE



Notes:

* Denotes a semester-length course.

The goal of the Science Department is to develop scientifically literate individuals who understand and appreciate the interrelationships of science, technology, and society. Based on the Next Generation Science Standards (NGSS), science courses at SAS blend core ideas with science and engineering practices and cross-cutting concepts to support students in developing usable knowledge that can be applied across the science disciplines. All science courses incorporate technology-based laboratories (including graphical analysis software) and interactive resources.
All ninth graders must enroll in a biology course. Tenth graders must enroll in a physical science course. Nearly all SAS graduates complete three years of science, with most earning four or more science credits.

## Biology <br> ID: $44005 \quad$ Credit: Life Science <br> Grade: 9-12 Length: Year

Prerequisite: None
Biology is a full-year, college-preparatory curriculum based on the Next Generation Science Standards (NGSS). As the course centers on the study of the living world, it is of special relevance and accessibility to students. Students will learn to use and improve their science processing skills in order to solve problems. Laboratory and field based investigations will allow students to have first-hand experience with modern methods of analysis. There are five life science topics in high school as outlined by NGSS: Structure and Function; Inheritance and Variation of Traits; Matter and Energy in Organisms and Ecosystems; Interdependent Relationships in Ecosystems; Natural Selection and Evolution.

## Accelerated Biology

ID: $44008 \quad$ Credit: Life Science
Grade: 9-12 Length: Year
Prerequisite: None.
Accelerated Biology is a full year, honors level course that follows the Next Generation Science Standards (NGSS), is taught at a faster pace, and requires more critical reading and daily work than Biology. This course will be of particular interest to students who are passionate about science or may be interested in a science-related career. There are five life science topics in high school as outlined by NGSS: Structure and Function; Inheritance and Variation of Traits; Matter and Energy in Organisms and Ecosystems; Interdependent Relationships in Ecosystems; Natural Selection and Evolution. Laboratory and field based investigations will allow students to have first-hand experience with modern methods of analysis. Students enrolling in this course should be able to read at or above grade level and should have demonstrated high levels of achievement in previous science courses.

## Anatomy \& Physiology

ID: $44010 \quad$ Credit: Life Science
Grade: 10-12 Length: Semester
Prerequisite: Completion of a full-year Biology course.
This course is designed for students interested in learning the important principles behind the human body as it relates to each system within it. The course is designed with student input providing them an opportunity to learn topics of the human body they find most relevant. Opportunities will be provided for dissection and extending knowledge through analysis of disease on the body system. Prior knowledge of cell communication and physiology will be leveraged to gain a more thorough understanding of the integration of different body systems, while examining the impact of modern living on our physiology.

## Biotechnology

ID: 44016 Credit: Life Science
Grade: 10-12 Length: Semester
Prerequisite: Completion of a full-year Biology course.
Biotechnology is a hands-on course for students who are interested in learning new biological lab skills and their application. Students will be given choice in their learning, which can range from cheese-making to DNA fingerprinting or CRISPR. Student-designed investigations are emphasized as students are exposed to a variety of fields including microbiology, cell biology, genetics, and bioengineering. It is an excellent course for students who are considering careers in any biological science field, such as medicine, genetics, biomedical engineering, or biomedical research.

## Environmental Science

ID: $44022 \quad$ Credit: Life Science
Grade: 10-12 Length: Semester
Prerequisite: Concurrent enrollment in Chemistry or Accelerated Chemistry is required to select this course in grade 10.
Environmental Science is a study of the interrelationships between man, other living things and the environment. Students will study all of the components of our environment and their interactions and will seek to understand man's impact on the environment and to discover ways by which we can minimize these impacts. Laboratory and field based investigations into some of these impacts will allow students to have first-hand experience with modern methods of environmental quality analysis built around
computer based probeware. Environmental Science is an applied science course in that it seeks to discover solutions to the most urgent problems facing human society today: the interrelated problems of population, resources, and pollution.

## Forensic Science

ID: 44017 Credit: Life Science
Grade: 11-12 Length: Semester
Prerequisite: None
In this course students will learn the real science behind the various laboratory techniques used when analyzing physical evidence from a crime scene. Students will be exposed to various academic fields including photography, mathematics, medicine, and entomology. Laboratory skills commensurate with basic forensic science procedure will be used to analyze topics as diverse as: fingerprints, DNA, blood, shoe, tire, hair \& fiber evidence, autopsy, and time of death estimation. Students will also be asked to critically analyze forensic evidence in terms of scientific validity and how it can be used to combat systemic racism in criminal justice systems.

## Marine Biology

ID: $44021 \quad$ Credit: Life Science
Grade: 10-12 Length: Semester
Prerequisite: The completion of a full-year Biology course.

This introductory course will explore the fundamentals of oceanography, the biology and diversity of marine organisms, and the patterns and processes that guide the ecological dynamics in various marine communities. The course will give students a general background in the taxonomy of marine organisms as well as the specific adaptations these organisms have evolved to survive in the ocean. Students will also be introduced to various marine ecosystems and the organisms that inhabit them. Laboratory and field based investigations will allow students to have first-hand experience with modern methods of analysis built around computer-based probeware.

## Zoology

ID: $44013 \quad$ Credit: Life Science
Grade: 11-12 Length: Semester
Prerequisite: None
Zoology is a lab-based course that emphasizes the principles of animal biology and an account of the major types and groups of animals from single celled protozoans to vertebrates. The discussion
of each animal type includes an account of its structure and bodily processes together with a summary of its habits and reproduction. Relations of animals to their natural environment and their importance to humans also receive consideration. The broader aspects of animal biology are studied; namely, anatomy, physiology (evolutionary relationships), and ecology.

## Chemistry

ID: $44014 \quad$ Credit: Physical Science Grade: 10-12 Length: Year

Prerequisite: Completion of a full-year Biology or Physical Science course, plus completion of Algebra I or any higher level math course.

Chemistry is a full-year, college-preparatory curriculum based on the Next Generation Science Standards (NGSS). This course models the fundamental laws of chemistry, kinetic molecular theory and atomic structure to make qualitative and quantitative representations and predictions about chemical processes. The core topics of chemistry as outlined in the NGSS include: (1) Matter and its interactions, (2) Forces and interactions, and (3) Energy. The first semester addresses student misconceptions of the particle model of matter in specific relation to conservation laws, the behaviour of gases and energy transfer. The second semester builds on these concepts and focuses on quantifying chemical reactions using masses, gases and solutions. The year concludes as we look deeper into acids, bases and equilibrium. This course encourages problem-solving, inquiry and communication with an emphasis on graphs, diagrams, written explanations, and calculations.

## Accelerated Chemistry

ID: 44023 Credit: Physical Science
Grade: 10-12 Length: Year
Prerequisite: Completion of a full-year Biology or Physical Science course, plus completion of Algebra I or any higher level math course.

Accelerated Chemistry is a full-year, honors level course that is aligned to the Next Generation Science Standards. Taught at a faster pace, it requires more daily work than Chemistry. This course will be of particular interest to those students who intend to pursue further science courses leading to a science-related career. The core topics of chemistry as outlined in the NGSS include: (1) Matter and its interactions, (2) Forces and interactions, and (3) Energy. Within this framework, additional depth in the Accelerated Chemistry curriculum is provided on the topics
of stoichiometry, atomic theory and periodicity, chemical bonding and molecular geometry, thermodynamics, kinetics, equilibrium, and electrochemistry. Laboratory investigations will allow students to have first-hand experience with both traditional and modern methods of analysis built around computer based probeware.

## Physical Science

ID: 44006 Credit: Physical Science
Grade: 10-12 Length: Year
Prerequisite: Completion of a full-year Biology course.
Physical Science is a newly redesigned full-year, lab-based course intended to fuel a student's love of science. This interdisciplinary, highly interactive course focuses on the fundamental concepts of chemistry, physics, and earth science. The structure of this course emphasizes projects, demonstrations, and experiments instead of traditional tests. Students will be actively involved with hands-on, experiential units driven by their interests. Potential topics could be the science of explosions or the study of interesting but unexplained scientific phenomena.

## Physics

$\begin{array}{ll}\text { ID: } 44015 & \text { Credit: Physical Science } \\ \text { Grade: 10-12 } & \text { Length: Year }\end{array}$
Grade: 10-12 Length: Year
Prerequisite: Concurrent enrollment in or completion of Geometry or Accelerated Math I or a higher-level mathematics course.

Physics is a full-year, college-preparatory curriculum based on the Next Generation Science Standards (NGSS). The major topics defined by the NGSS for Physics are Forces and Interactions, Energy, and Waves and Electromagnetic Radiation. For each topic, students perform laboratory activities to discover or verify physical phenomena and solve problems with calculations. The laboratory activities help students improve their skill of engaging with arguments from evidence; solving problems with calculations helps students refine their skill of mathematical and computational thinking. At the end of each topic students complete a project applying their knowledge and skills for the topic to an interesting situation, showing how physics explains the world.

## Accelerated Physics

ID: $44051 \quad$ Credit: Physical Science<br>Grade: 10-12 Length: Year

Prerequisite: Concurrent enrollment in or completion of Algebra II/ Trigonometry, Accelerated Math II or a higher-level math course.
Note: The content in the course is aligned to the content found in the AP Physics 1 curriculum. Students enrolled in this course may choose to take the AP Physics 1 exam.
Accelerated Physics is a full-year, honors-level course aligned with the Next Generation Science Standards (NGSS). Taught at a deeper level and faster pace than Physics, Accelerated Physics will be of particular interest to those students who intend to pursue further science courses. The course covers a broad range of mechanics topics such as kinematics, dynamics, momentum, energy, fluids, and oscillations. For each topic, students will perform hands-on or simulated laboratory activities, analyze data and draw conclusions from given data, and solve problems using mathematical calculations. The laboratory activities provide opportunities for students to improve their skills of asking questions, designing and carrying out experiments, and understanding the physical phenomena from the activity. When analyzing data and drawing conclusions from given data, students improve their skill of reasoning by making arguments from evidence. Solving problems with mathematical calculations helps students refine their skill of mathematical and computational thinking. Throughout the course, students will apply their knowledge and skills to real-world scenarios fostering a deeper understanding of physics concepts.

# ADVANCED STUDIES COURSE OPTIONS 

AP Biology<br>ID: 44027 Credit: Life Science<br>Grade: 11-12 Length: Year<br>Prerequisite: Completion of a full-year Biology course and one other full-year science course.<br>Recommended: Grade of $B+$ or higher in full-year science courses, or a grade of $B$ or higher in any Accelerated, AP or AT level science course.

Note: This course has an additional grade point weighting of 0.5 .

AP Biology is designed for students who are interested in higher studies in biological sciences, engineering, medicine, or related disciplines. This course will examine the four big biological ideas of Evolution, Energy, Information, and Interaction by looking at topics such as molecular and cellular biology, physiology of plants and animals, heredity, ecology, and evolution. While biological knowledge and concepts will be taught, students will approach the material from the perspective of science practices such as modeling, mathematical analysis, scientific questioning, experimental design and execution, data analysis and evaluation, and conceptual connections. Biological concepts will be examined through laboratory exercises that focus on inquiry and investigation. Throughout this course students will improve their capacities for problem solving and critical thinking, preparing them for further study in the biological sciences. Students will be prepared for and strongly encouraged to sit for the AP exam in May.

## AP Chemistry

ID: $44031 \quad$ Credit: Physical Science
Grade: 11-12 Length: Year
Prerequisite: Semester I or II grade of A or higher in Chemistry; or Semester I or II grade of B or higher in Accelerated Chemistry.
Note: This course has an additional grade point weighting of 0.5 .

AP Chemistry is a rigorous, college-level course specifically intended for students who plan higher studies in science, engineering, or medicine. Topics studied include atoms and forces, kinetics, equilibrium, thermodynamics, quantum mechanics and periodicity, electrochemistry and gaseous behavior. Laboratory work involves careful measurements and applications of theory to explain and/or predict the behavior of chemical systems. Laboratory work will include both traditional and probeware-based experiences. The subject matter in this course is presented with an emphasis on both chemical calculations and the
conceptual foundation of chemical principles, so a strong mathematics background is imperative. Students will be expected to demonstrate the ability to read and comprehend sophisticated material from college level textbooks and journals and to summarize concepts. Students will be prepared for and strongly encouraged to sit for the AP exam in May.

## AP Physics 2

ID: $44033 \quad$ Credit: Physical Science
Grade: 11-12 Length: Year
Prerequisite: Completion of any level of full-year physics.
Recommended: Completion of Chemistry or Accelerated Chemistry prior to enrollment in this course.

Note: This course has an additional grade point weighting of 0.5 .

AP Physics 2 is equivalent to a second-semester college course in algebra-based physics. The course covers fluid mechanics, thermodynamics, electricity and magnetism, waves and optics, and modern (atomic, nuclear and quantum) physics. Similar to Physics, and AP Physics 1, this course will allow students to achieve an in-depth understanding of the above additional topics using hands-on explorations of physics content and inquiry-based instructional strategies. In AP Physics 2, they will build on their existing understandings by using multiple representations of physical processes, solving multi-step problems, and designing investigations. The course is based on six big ideas, which encompasses core scientific principles, theories, and processes that cut across traditional boundaries and provide a broad way of thinking about the physical world. Students will be prepared for and strongly encouraged to sit for the AP exam in May.

## AP Physics C

ID: $44030 \quad$ Credit: Physical Science
Grade: 11-12 Length: Year
Prerequisite: Completion of any level of full-year physics course AND completion of, or concurrent enrollment in $A P$ Calculus $A B$ or AP Calculus BC or any AT calculusbased course.
Note: This course has an additional grade point weighting of 0.5 .

AP Physics $C$ is a set of two rigorous calculusbased physics courses for students planning on higher studies in science or engineering. The course covers topics from Mechanics and Electricity and Magnetism, providing students with the equivalent of an introductory collegelevel physics course for science majors. As an integrated course, Mechanics and Electricity and

Magnetism are covered each semester. The first semester begins with algebra-based Electricity and Magnetism, transitioning to calculus-based Mechanics. The second semester begins with calculus-based Mechanics, finishing with calculusbased Electricity and Magnetism. Students who are successful in this course will be prepared for and encouraged to sit for the AP Physics C: Mechanics and AP Physics C: Electricity and Magnetism examinations.

## AT Environmental Science \& Field Research

ID: 44036 Credit: Life Science
Grade: 10-12 Length: Year
Prerequisite: Completion of two, full-year science courses. A semester I grade of $B+$ or higher in Accelerated Biology plus concurrent enrollment in another full-year science course is required to select this course in grade 10.

Recommended: Completion of a full-year biology course and a full year chemistry course prior to enrollment with a Grade of $B+$ or higher in any general level science course, and a grade of $B$ or higher in any Accelerated, AP or AT level science course.

Note: The AT designation indicates a course is at the university level, putting it at or above the level of a traditional Advanced Placement (AP) course. This course has an additional grade point weighting of 0.5 .

This course offers an intensive, year-long inquiry into the integration of nature, society, economy, and wellness. Grounded in science, students in the class will explore a wide range of environmental issues both natural and human-made. It is designed for students who already have a solid grasp of biological and chemical sciences and can demonstrate a passion for examining solutions and alternatives for resolving, decreasing, and preventing environmental problems. It is beneficial for students to have a strong background in math as our data analysis will require the use of dimensional analysis, half-life calculations, percent change, and significant figures. Students will develop insights into global cultures in less and more economically developed societies and build empathy for myriad worldviews on current issues. Science and engineering practices will be applied through collaborative lab work and analysis of environmental quality to determine ecosystem integrity. Students will be prepared to take the College Board AP Environmental Science exam.

Mandatory fieldwork investigations will take students from the classroom to Tioman Island in Malaysia to examine the regional aquatic, marine,
and terrestrial ecosystems. The trip is typically scheduled early- to mid-September and takes place during regular school days and over a weekend. Estimated costs are $\$ 800-\$ 900$.

## AT Science: Computational Modeling \& Simulation

ID: 44052 Credit: Physical Science
Grade: 10-12 Length: Semester
Prerequisite: Completion of or concurrent enrollment in any full-year physics course.
Recommended: It is recommended that students have some prior computer programming experience.
Note: The AT designation indicates a course is at the university level, putting it at or above the level of a traditional Advanced Placement (AP) course. This course has an additional grade point weighting of 0.5.

Although only recently thought of as an emerging field of study, computational modeling and simulation has now become an integral aspect in solving scientific real-world problems. This course will provide an introduction to mathematical methods and computational approaches used to model complex science and engineering problems. The first part of the semester is dedicated to learning various computational methods using several programming languages/ platforms, such as VPython, Excel/Google sheets, MATLAB, and STELLA. Topics for this course include: modeling process and practices, system dynamics and models (eg. epidemiology modeling such as logistic growth/decay of diseases), physics models (ex. force and motion), numerical methods (Euler-Cromer), probabilistic and statistical modeling (ex. Monte Carlo simulations), and other mathematical techniques (matrices). With these tools, students will create visual representations of models, develop relationships between modeled components, run simulations, generate and analyze results. The last part of the semester is dedicated to the development of individualized, student-designed projects that model concepts from prior science and engineering courses utilizing tools and approaches learned to that point in the course. The course provides a wide variety of application areas such as physics, astronomy, biology, chemistry, economics, engineering, environmental science, finance, geology, medicine, psychology, and the social sciences.

WORLD LANGUAGES


Notes:
SAS students progress through language proficiency at their own pace. Although some students may have a different progression, the above pathways represent the most common pathways for SAS students

## Chinese Language

* Please note that the AP Chinese Language and Culture course follows Intermediate High 3 and is before Advanced 1 in the recommended Chinese pathway at SAS. The proficiency level required for the Advanced Placement course is solidified after Intermediate High 3. If a student, including rising seniors, can function consistently at an Intermediate High proficiency level in reading, writing, speaking, and listening, the student should reach out to their teacher to assess if the student might be eligible to take the Advanced Placement course and meet expectations on the AP exam.
**Beginning in 2025-26, Advanced 1 and Advanced 2 will become Advanced Topics (AT) Courses.


## Spanish Language

* Please note that the AP Spanish Language and Culture course follows Advanced 1 in the recommended Spanish pathway at SAS. The proficiency level required for the Advanced Placement course is solidified after Advanced 1. If a student, including rising seniors, can function consistently at an Intermediate High proficiency level in reading, writing, speaking, and listening, the student should reach out to their teacher to assess if the student might be eligible to take the Advanced Placement course and meet expectations on the AP exam.


## French Language

${ }^{++}$Please note that the AP French Language and Culture course follows Intermediate High 3 in the recommended French pathway at SAS. The proficiency level required for the Advanced Placement course is solidified after Intermediate High 3. If a student, including rising seniors, can function consistently at an Intermediate High proficiency in reading, writing, speaking, and listening, a student should reach out to their teacher to assess if the student might be eligible to take the Advanced Placement course and meet expectations on the AP exam.

The goal of the World Languages program is to establish an understanding of the respective cultures and to develop language proficiency through a focus on communicative ability - in other words, a focus on what students are able to do with the language: the student's language proficiency. We believe that the primary purpose of learning another language is to develop the ability to communicate effectively in real-life contexts.

In order to achieve the performance targets, we designed multi-year courses to allow students to take the time they need to build greater confidence and consistency in their language ability, while experiencing new culturally-rich thematic units.

We offer instruction in three different languages: Chinese (Mandarin), French, and Spanish.
The following World Languages department policies and practices should also be noted:

- Courses are taught in the target language beginning in all our Novice courses. Mandarin is taught using simplified Chinese characters.
- Interpersonal listening and speaking skills are a key component of our program and are the primary focus in our courses. These skills are most important in the first stages of learning a language, with increasing attention given to the development and assessment of the interpretive skills (listening and reading), as well as presentational communication (speaking and writing) as students move up levels.
- Two years of study of the same foreign language or the equivalent (e.g., Chinese/French/Spanish: Novice, Intermediate) proficiency is the minimum SAS graduation requirement. Since most colleges and universities include language study as an admission requirement, students are advised to attain at least three years of language study.
- New students who have learned Chinese, French, or Spanish prior to SAS will be assessed for placement.


## SEAL OF BILITERACY

SAS is proud to offer the Seal of Biliteracy to students in the graduating classes of 2018 and beyond. The Seal of Biliteracy is an optional recognition that serves to certify attainment of biliteracy for graduating students and is awarded on high school diplomas. It is a formal statement of accomplishment and language proficiency, and as of October 1, 2020, high schools in 40 U.S. states offered a Seal of Biliteracy (http://sealofbiliteracy.org/).
At SAS, a Seal of Biliteracy is offered in the three languages that are taught here: Mandarin Chinese, French, and Spanish. In order to earn a Seal of Biliteracy at SAS, seniors must demonstrate a minimum of Intermediate High proficiency in all four skills: reading, writing, listening, and speaking. Proficiency will be determined using the STAMP assessment. Students in their senior year who are interested in pursuing the Seal of Biliteracy may submit an application to the SAS Director of World Languages.

## Novice Courses

ID: 45040
Spanish: Novice
ID: $45050 \quad$ French: Novice
ID: $45060 \quad$ Chinese: Novice
Grade: 9-12 Length: Year Credit: Language Prerequisite: None
These year-long courses are for students who have little or no experience with the language. They provide students with the necessary skills to understand and create meaningful communication from early on in a supportive and rich environment. The courses focus on the development of listening and speaking through interpersonal communication. The performance exit target is Novice High.

Novice High speakers can manage a number of uncomplicated communicative tasks in straightforward social situations. They can express
personal meaning by relying heavily on learned phrases (memorized language) or combinations of these. They also respond to simple, direct questions or requests for information.
The skills of writing and interpretive listening and reading are also integrated into the course to the extent that they foster the development of students' communicative ability as appropriate to the performance target.

## Intermediate Courses

ID: 45041
ID: 45042
ID: 45043
ID: 45051
ID: 45052
ID: 45053
ID: 45061
ID: 45062
ID: 45063
Spanish: Intermediate
Spanish: Intermediate II
Spanish: Intermediate III
French: Intermediate
French: Intermediate II
French: Intermediate III
Chinese: Intermediate
Chinese: Intermediate II
Chinese: Intermediate III

Grade: 9-12 Length: Year Credit: Language
Prerequisite: Dependent on enrollment numbers these courses may be scheduled concurrently with other advanced classes of the same language. When a class is scheduled concurrently, students will receive differentiated instruction to meet their needs, will receive credit for the level of the class in which they are enrolled, and that is the course that will appear on their transcript.

All students new to SAS will be invited for a placement test to determine the most appropriate level.

These multi-year courses are for students who have reached at least a Novice level of performance in interpersonal listening and speaking. It is possible that students performing at the Novice Mid level could be considered for admission with teacher recommendation.

With differentiation and new culturally rich thematic units each year, teachers engage and support students at whichever stage they are in the proficiency building process. This course focuses on interpersonal listening and speaking, and the performance exit target is Intermediate Mid.

Intermediate Mid speakers are able to successfully handle a variety of uncomplicated communicative tasks in straightforward social situations. They can express their own thoughts and maintain conversations by asking and answering a variety of questions, allowing them to exchange information about family, home, daily activities, interests and personal preferences, as well as physical and social needs, such as food, shopping and travel. This performance target is most commonly achieved over a period of two to three years.

The writing skills, plus interpretive listening and reading, are also integrated into the course to the extent that they foster the development of students' communicative ability as appropriate to the performance target.

## Intermediate High Courses

ID: $45044 \quad$ Spanish: Intermediate High ID: 45045 Spanish: Intermediate High II ID: 45046 Spanish: Intermediate High III

ID: $45054 \quad$ French: Intermediate High
ID: $45055 \quad$ French: Intermediate High II
ID: $45056 \quad$ French: Intermediate High III
ID: $45064 \quad$ Chinese: Intermediate High
ID: $45065 \quad$ Chinese: Intermediate High II
ID: $45066 \quad$ Chinese: Intermediate High III
Grade: 9-12 Length: Year Credit: Language
Prerequisite: Current teacher recommendation
Note: Dependent on enrollment numbers these courses may be scheduled concurrently with other intermediate High classes of the same language. When a class is scheduled concurrently, students will receive differentiated instruction to meet their needs, will receive credit for the level of the class in which they are enrolled, and that is the course that will appear on their transcript.

These multi-year courses are for students who have demonstrated an Intermediate Mid level of performance in interpersonal listening and speaking, and/or completed the 3 years of the Intermediate level course.

With differentiation and new culturally rich thematic units each year, teachers engage with and support students by meeting them where they are at in the proficiency building process. While this course continues to emphasize interpersonal listening and speaking, interpretive listening and reading, and presentational writing, these skills are more formally developed and assessed at the intermediate high level. For French and Spanish the performance exit target for each of these skills is Intermediate High. For Chinese, while the performance exit target is Intermediate High in listening and speaking, the exit target for reading and writing is Intermediate Mid.

Intermediate High speakers are able to successfully handle uncomplicated tasks and social situations requiring an exchange of information about their school, recreation, particular interests, and areas of competence. They also demonstrate an increasing ability to express their own ideas about some topics beyond themselves such as current events or matters of public and community interest. Students at this level also demonstrate the ability to resolve problems they might encounter in their daily lives. Intermediate High students will learn to narrate and describe in three major time frames - present, past, and future - mostly in connected paragraphs. This performance target is most commonly achieved over a period of two to three years.

## Advanced

| ID: 45047 | Spanish: Advanced |
| :--- | :--- |
| ID: 45048 | Spanish: Advanced II |
| ID: 45070 | Chinese: Advanced* |
| ID: 45071 | Chinese: Advanced II* |

Grade: 9-12 Length: Year Credit: Language *Beginning in 2025-26, Chinese: Advanced and Chinese Advanced II will become Advanced Topic (AT) courses.

Prerequisite: Current teacher recommendation
Note: Dependent on enrollment numbers these courses may be scheduled concurrently with other intermediate classes of the same language. Whether a class is scheduled concurrently, students will receive differentiated instruction to meet their needs and will receive credit for the level of the class in which they are enrolled and that is the course that will appear on their transcript.

This multi-year course is for students who have demonstrated an Intermediate High level of performance in interpersonal listening and speaking, interpretive listening and reading, and presentational writing.

Level II is indicative of the second year of language instruction at this level and refers to the proficiency level targets that should be achieved at the end of the course. This structure will allow students the time generally needed to reach the proficiency level being targeted.

Students should be able to express themselves orally and in writing in three major time frames present, past, and future - and mostly in connected paragraphs. As well, they should be able to handle some topics beyond themselves (current events/issues, matters of public and community interest, also history and literature in the Chinese course). These courses focus on all modes of communication - interpersonal, presentational, and interpretive - and the performance target is at least Advanced Low for each.

Advanced speakers are able to handle a variety of communicative tasks. They are able to participate in most informal and some formal conversations, including some topics related to current events, and matters of public and community interest. Advanced Low writers can meet basic academic writing needs and compose texts with structured and extended-length paragraphs. Advanced courses dive into history and culture of the target language.

On students' transcripts, advanced courses are designated as being equivalent to an honors
course, demonstrating fluency across the communicative modes.

## ADVANCED STUDIES COURSE OPTIONS

AP French Language \& Culture<br>ID: $45023 \quad$ Credit: Language<br>Grade: 9-12 Length: Year<br>Prerequisite: Current teacher recommendation.

Note: Grade 11 students who have completed at least one year in the Intermediate High course may select this course for grade 12 without a teacher recommendation. Students in grades 9 and 10 still require a teacher recommendation. This course has an additional grade point weighting of 0.5.

This AP course is comparable to a fourth semester college course in French. The course prepares students to demonstrate their level of French proficiency with a higher degree of accuracy and fluency across the three communicative modes: spoken and written interpersonal communication; audio, visual and audiovisual interpretive communication; and spoken and written presentational communication. Students will also hone their ability to comprehend and communicate in formal and informal contexts reflective of the richness of French Speaking countries' language and cultures. The study of literature, visual arts, films, and media in their historical context, will also enable students to develop critical thinking skills and to express themselves in French with enhanced sophistication. Instructional materials and activities are carefully and strategically adapted from authentic sources to support the linguistic and cultural goals of the course. Students will be prepared for and strongly encouraged to sit for the AP exam in May.

## AP Spanish Language \& Culture

ID: 45024 Credit: Language

Grade: 9-12 Length: Year
Prerequisite: Current teacher recommendation.
Note: Grade 11 students who have completed at least one year in the Intermediate High course may select this course for grade 12 without a teacher recommendation. Students in grades 9 and 10 still require a teacher recommendation. This course has an additional grade point weighting of 0.5.

This AP course is comparable to a fourth semester college course in Spanish. The course prepares students to demonstrate their level of Spanish proficiency with a higher degree of accuracy and fluency across the three communicative modes: spoken and written interpersonal communication; audio, visual, and audiovisual
interpretive communication; and spoken and written presentational communication. Students will also hone their ability to comprehend and communicate in formal and informal contexts reflective of the richness of Hispanic language and cultures. Instructional materials and activities are carefully and strategically adapted from authentic sources to support the linguistic and cultural goals of the course. The study of literature, visual arts, films, and media in their historical context, will also enable students to develop critical thinking skills and to express themselves in Spanish with enhanced sophistication. Students will be prepared for and strongly encouraged to sit for the AP exam in May.

## AP Chinese Language \& Culture

ID: $45025 \quad$ Credit: Language
Grade: 9-12 Length: Year
Prerequisite: Current teacher recommendation.
Note: Grade 11 students who have completed at least one year in the Intermediate High course may select this course for grade 12 without a teacher recommendation. Students in grades 9 and 10 still require a teacher recommendation. This course has an additional grade point weighting of 0.5 .

AP Chinese is designed to be comparable to fourth semester university courses in Mandarin Chinese. The course prepares students to demonstrate their level of Chinese proficiency across the three communicative modes (interpersonal, interpretive, and presentational) and the five goal areas (communication, cultures, connections, comparisons, and communities). Students are provided with ongoing and varied opportunities to further develop their proficiencies across the full range of language skills within a cultural frame of reference. Materials and activities are adapted from authentic sources to support the linguistic and cultural goals of the course. Both contemporary and historical Chinese culture are explored. Students will be prepared for and strongly encouraged to sit for the AP exam in May.

## AT Spanish Language: Latin American

## History \& Culture Through Arts \& Media

ID: 45049 Credit: Language
Grade: 10-12 Length: Year
Prerequisite: Demonstrated proficiency level of Advanced Low or higher.

Note: The Advanced Topic (AT) designation indicates a course is at university level, putting it at or above the level of a traditional Advanced Placement (AP) course. Like an AP course, this course has an additional grade point weighting of 0.5.
This inquiry-based course intends to provide students with the opportunity to develop and apply their Spanish language skills by studying selected eras of Hispano American history and Hispano American iconic figures. Additionally the use of Arts, Literature, and Cinema will provide a platform for analysing and exploring cultural viewpoints. The course seeks to build on language abilities, with a focus on cultural competency, textual and artistic analysis, and collaborative skills through project-based learning. The study of literature, visual arts, films, and media in their historical context, will also enable students to develop critical thinking skills and to express themselves in Spanish with enhanced sophistication. With some self-study, students will be prepared for and encouraged to sit for the AP exam in May.

## AT Chinese Language: History

ID: 45029 Credit: Language
Grade: 10-12 Length: Year
Prerequisite: Demonstrated proficiency levels of Advanced Low or higher in all four skills.
Note: The Advanced Topic (AT) designation indicates a course is at university level, putting it at or above the level of a traditional Advanced Placement (AP) course. Like an AP course, this course has an additional grade point weighting of 0.5.

This inquiry and project-based course will provide students with the opportunity to gain deeper understanding of the significance of key historical periods in Chinese history, while developing their advanced Chinese language proficiency. The course is also designed for students to identify their interests in specific areas of Chinese history and culture and delve into the process of researching, analysing, and reevaluating existing perceptions or stereotypes, to draw their own evidence-based conclusions of the significance of some historical phenomena. Students will be expected to complete a comprehensive project related to their own areas of interest each semester.

## TECHNOLOGY, COMPUTER SCIENCE, AND ROBOTICS



## GRADE 11-12

AT Computer Science: Data Structures*

## Note:

* Denotes course with a prerequisite.
** Courses offered alternating years (see note section in course description)

Technology, Computer Science, and Robotics (TCR) courses equip students with the skills and insights needed for the real world. In these courses, critical thinking takes center stage as students engage in hands-on, project-based experiences that mirror the dynamic challenges of the professional landscape.
Our TCR courses provide a platform for students to not only hone critical thinking but also explore their unique interests. Through a blend of core academic knowledge and hands-on applications, students navigate authentic, creative demands that prepare them for the complexities of the modern world.

Please review the grade requirements and prerequisites for each TCR course to ensure alignment with appropriate challenges and experiences.

# COMPUTER SCIENCE AND DESIGN 

## Computer Science: Mobile Application Development

ID: 44504 Credit: Elective<br>Grade: 9-12 Length: Semester

Prerequisite: None
This course provides an introduction to coding through visual app building. Students will learn about how to build Mobile Apps using MIT App inventor. In the process, students will learn about building basic apps, making visual games through using a canvas, using databases, and making HTTP requests across the internet. This hands-on course gives students the ability to create their own vision for an app. They will learn about debugging, designing algorithms, and modeling an app. This course will be taught at the introductory level, and requires no previous programming knowledge. Additionally, a specific kind of phone (Android or iOS ) is not required to take this course. This course provides an introduction to the other computer science courses offered.

## Computer Science I

$\begin{array}{ll}\text { ID: 44518 } & \text { Credit: Elective } \\ \text { Grade: 9-12 } & \text { Length: Semeste }\end{array}$
Grade: 9-12 Length: Semester
Prerequisite: Concurrent enrollment in Geometry or higher level math class.

This course is tailored for individuals who have limited or no prior programming experience. It serves as an initial exploration into the fundamentals of computing and concepts using text-based Python coding. Students will immerse themselves in learning software programming principles. Students will get to explore Python modules(existing libraries) and learn how to integrate the various functions within the module into their code. Every unit culminates in the creation of a creative project. Throughout this journey, students will acquire the skills to dissect complex problems into manageable components (decomposition), simplify real-world scenarios (abstraction), and identify and resolve errors in their code (debugging). By the end of the course, students would have completed four major projects in Python.

The course is thoughtfully crafted to provide an engaging and inclusive introduction for those who seek to gain insight into the essence of programming and its role in our contemporary technological landscape.

# Designing Virtual Worlds 

ID: $44524 \quad$ Credit: Elective
Grade: 9-12 Length: Semester
Prerequisite: None
Note: Will be offered in 2024-25. May not be offered in 2025-26.

This is a project-based course, where interdisciplinary teams design and rapidly prototype interactive virtual worlds through a series of game jams. In teams, designers will combine their mechanical skills in 2D art, 3D modeling, creative writing, programming, and sound design to conceive, develop, and construct compelling virtual environments. To realize their designs, students will use modeling tools, paint tools, sound processing and composition tools, and the Unity game engine. Existing and peer works will be interpreted and evaluated with the Mechanics-Dynamics-Aesthetics framework. Through a rapid prototyping process, students will create multiple products, receive and contribute critical feedback, and gain valuable experience with the interdisciplinary, collaborative skills essential for life in the 21st century. Students may repeat this course to build a wider or deeper portfolio of creative projects. Those who have previously taken the course are expected to have high levels of independence, play a leadership role on teams, explore a new discipline, and give peer feedback.

## Emerging Technologies

ID: $44501 \quad$ Credit: Elective
Grade: 9-11 Length: Semester
Prerequisite: None
Note: Will not be offered in 2024-25. May be offered in 2025-26.

Students explore a wide range of self-directed, hands-on learning experiences utilizing a range of tools and materials to create personally meaningful objects. They learn to use prototyping techniques and new technology including 3D-printing, laser cutting, vector character animation, microcontrollers, and basic programming to realize their ideas. As they tinker, they learn valuable skills and mindsets including resourcefulness, resilience, collaboration, and communication. The course is a good entry point into more specialized courses offered at the junior and senior level. Students may take the course a second time if they wish to expand the knowledge, skills, and projects that they began developing during their first semester experience.

# Artificial Intelligence I 

ID: $44535 \quad$ Credit: Elective
Grade: 10-12 Length: Semester
Prerequisite: Semester grade of $B+$ or higher in Computer Science 1 and completion of Algebra II/ Trigonometry

This semester-long course combines computational thinking with philosophical inquiry to offer students a comprehensive introduction to Artificial Intelligence (AI). Using Python programming as the foundation, students will explore Al from both practical and ethical standpoints. The course covers data extraction, analysis, predictive modeling, and computergenerated content creation. Additionally, it fosters social and ethical computing awareness, preparing students for responsible Al use in an evolving society. Students are expected to have basic knowledge of the Python programming language, as the course aims to teach advanced programming skills that you can use in future research courses across disciplines.

## ENGINEERING AND ROBOTICS

## Introduction to Robotics

ID: $46520 \quad$ Credit: Elective
Grade: 9-12 Length: Semester

## Prerequisite: None

In this course students will learn new skills and apply critical thinking to solve concrete problems. Important learning goals of the course are innovation, perseverance, teamwork and communication. The course is divided into three main segments: VEX, Fusion 360, and Arduinos.

- VEX robots are approximately one cubic foot in size and are a great starting point for our robotics program. They will be used in an inclass Firefighter rescue competition. Students design, build and drive robots to perform these real-world tasks.
- Fusion 360 is used to create our 3D designs. Fusion 360 is the tool of choice for manufacturing, machining, engineering, and industrial design experts. We employ Fusion 360 to model custom parts for our robots.
- Arduinos, an open-source electronics platform, and additional introductory electronics kits allow students to understand the basics of hardware/software interfacing. Arduinos and their close relatives are at the heart of the hand phone, microwave oven, automobile, and airplanes. Using Arduinos
leads to a basic understanding of the interaction between hardware and software.


## Robotics Science

ID: 46522 / 46529 Credit: Elective
Grade: 9-12 Length: Semester/Year

## Prerequisite: None

This course applies learning in the areas of mechanics, electronics, CAD, robotics design, writing, art and marketing. We will investigate criteria and constraints to integrated robotic solutions into Art, Entertainment, and Smart Living. Additionally, we will seek to develop solutions and use processes to optimize the results. While creative new solutions are valued there will be an emphasis on identifying the best solution to the problem. Which will involve research into how similar problems have been solved in the past. To add a sense of purpose, our class projects will be shared with an authentic audience. Successful students are those who excel at collaboration, innovation and perseverance.

## Engineering Design

ID: $44012 \quad$ Credit: Elective

Grade: 10-12 Length: Semester

## Prerequisite: None

Engineering Design will interest students who wish to understand the complementary roles of engineers and designers through a wide range of self-directed, hands-on learning experiences. Students learn to use prototyping techniques and new technologies including 3D-printing, laser and waterjet cutting, computer aided design (CAD), micro-controllers, and basic programming to solve a range of engineering and design challenges. The class is highly collaborative and there is a very explicit focus on developing skills and mindsets of self-directedness, resilience, collaboration and communication.

## ADVANCED STUDIES COURSE OPTIONS

## AP Computer Science

ID: $44520 \quad$ Credit: Elective
Grade: 10-12 Length: Year
Prerequisite: Semester grade of $B$ or higher in Computer Science I and completion of Algebra 1. Students who do not meet these requirements but believe they can be successful in the course may speak with AP CS faculty and sit for an entrance test to determine readiness.

Recommended: Completion of Algebra II / Trigonometry course.
Note: This course has an additional grade point weighting of 0.5 .

AP Computer Science is a full-year course designed to teach the fundamentals of programming with the Java programming language. It is designed as an accelerated first course in computer science or as a course for people who will major in other disciplines requiring significant involvement with computing. Logic, problem solving, math, algebraic expressions and comprehension skills along with a strong core GPA are good indicators of success. AP Computer Science emphasizes programming methodology with a concentration on problem solving, algorithm development, object oriented programming, and computational thinking principles. A large part of the course is built around the design, creation, and testing of computer programs or parts of programs that correctly solve a given problem. This year-long course is identical to a first semester programming course taught at most universities. Students are therefore expected to commit to a daily schedule of programming (approx 2 hours per week) and studying activities. Students will be prepared for and strongly encouraged to sit for the AP exam in May.

## AT Computer Science: Data Structures

ID: $44540 \quad$ Credit: Elective
Grade: 11-12 Length: Year
Prerequisite: Semester I grade of $B$ or higher in AP Computer Science.
Note: The Advanced Topic (AT) designation indicates a course is at university level, putting it at or above the level of a traditional Advanced Placement (AP) course. This course has an additional grade point weighting of 0.5 .

This course is a standard college course on algorithms and advanced data structures in an object-oriented environment. The sorting algorithms include selection, bubble, insertion, merge, and quick. The data structures include arrays, linked lists, stacks, queues, trees, sets, maps, and hashing. Additional topics include recursion, the Java Collections framework, Big-O analysis, Interfaces, abstract classes unit testing, APIs, Structured Query Language (SQL),and class design. The programming language is Java. Students taking this course should be independent and analytical thinkers able to spend a significant amount of time (approx 3 hrs per week) programming in Java outside of class.

## VISUAL \& PERFORMING ARTS

## VISUAL ARTS



## Note:

(E) Elective credit

Singapore American School offers a number of options in the visual arts to meet the needs and interests of all students.

The comprehensive visual arts program will appeal to students interested in art courses that enrich their high school experience, as well as those students who intend to pursue art careers. Courses available cover a broad range of skills that promote innovation using a variety of traditional and digital media.

Credits earned in Visual \& Performing Arts fulfill the department specific minimum graduation requirements (except in the case of Journalism: Yearbook which serves as an elective credit).

## STUDIO ARTS

## Art I: Foundations

ID: $46100 \quad$ Credit: Visual/Performing Arts
Grade: 9-12 Length: Semester
Prerequisite: None
In this survey course, students are exposed to a variety of media through study of the elements and principles of art and design. Students acquire and apply skills using a variety of media and techniques. Pencil, charcoal, colored pencil, various paints, sculptural materials and linoleum for printmaking are examples of media offered to students. Emphasis is placed on skills acquisition and creativity. This course enables students to identify their strengths and possible areas of interest for future development. It provides the necessary foundation for the more advanced Studio Art courses.

## Ceramics I

ID: $46104 \quad$ Credit: Visual/Performing Arts
Grade: 10-12 Length: Semester

## Prerequisite: None

In this one-semester course students learn basic hand building, decorating and glazing techniques. Students are free to develop their own ideas within structured guidelines while building on acquired skills. Students leave the class with an assortment of forms of different functions, shapes, and sizes. Instructional time is also spent on sculptural pieces. Students are responsible for preparing their materials and looking after their pieces through the various stages of the ceramic process from construction through glazing. An introduction to glaze chemistry will be given as a part of this course but will not be the focus. This course is a prerequisite for students who wish to continue on to learn potter's wheel techniques in Ceramics II.

## Ceramics II

ID: $46105 \quad$ Credit: Visual/Performing Arts Grade: 10-12 Length: Semester
Prerequisite: Ceramics I
This class builds on the skills acquired in the Ceramics I class. Students will work towards mastering basic hand building. A focus on modern ceramic art as it exists today will be the focus of cultural investigation. Students will be given design and glaze chemistry problems to solve using skills and innovation for developing selfexpression. They are responsible for maintaining
the ceramic supplies needed and for managing the clay process from construction through glazing.

## Ceramics III

ID: 46118 Credit: Visual/Performing Arts Grade: 10-12 Length: Year

Prerequisite: Completion of Ceramics I and Ceramics II; or acceptable portfolio and teacher recommendation.

In this full-year course, students will deepen their understanding of the visual arts through investigating, critically analyzing and making art within the medium of ceramics. In the first semester, students will seek inspiration by identifying, selecting, and exploring artists, artworks, and cultural contexts within the region, as well as researching advanced ceramic materials and technique applications. During the second quarter, students will begin exploring a conceptual approach to their work. There will be less emphasis on function and tradition and more on the search for a contemporary perspective to ceramics as fine art. The second semester's focus is to develop students' voices in their work, including writing artistic statements, and then putting their knowledge and understanding into practice by transforming ideas into action to produce a body of work for exhibition. This course will enable students to create a portfolio based on work that is personal, informed by research and with an awareness of the impact their work and ideas may have on others in the world.

## Studio Art

ID: 46106 Credit: Visual/Performing Arts
Grade: 10-12 Length: Year
Prerequisite: Art Foundations; Mixed Media \& Digital Processes; or Art 8 plus approval from 8th-grade Art teacher

In this course students are provided with the opportunity to further develop their artistic abilities and interests by honing their drawing and painting skills. They find and build upon their strengths in a variety of media within each unit. Students are exposed to a broad spectrum of art styles allowing each student to find and develop their particular area(s) of interest. Finding voice in their work and making connections both culturally and personally are a focus throughout the course. Students work to achieve higher levels of proficiency in art. Studio Art is a Pre-AP course. The work created prepares students for Advanced Placement courses.

Mixed Media \& Digital Processes<br>ID: $46108 \quad$ Credit: Visual/Performing Arts<br>Grade: 9-12 Length: Semester

Prerequisite: None
This course is designed for students of all levels who are interested in experimenting with and combining a variety of materials and art processes. Students will explore a range of layering processes to create rich textures using techniques in painting, drawing, printmaking, collage, and photography to manipulate the surface of their work. Students will also learn to use Adobe Photoshop to edit, manipulate, and composite photo imagery to be printed and integrated into their mixed media surfaces. This course enables students to identify their strengths and possible areas of interest for portfolio development.

## Graphic Design

ID: $44527 \quad$ Credit: Visual/Performing Arts Grade: 10-12 Length: Semester
Prerequisite: None
Enjoy sketching, photography, or just tinkering with graphics? Have you ever considered designing your own graphics for social media or even your own font? Graphic design is an integral part of our daily life. From gum wrappers to infographics to the t-shirts people wear, designers create and communicate powerful messages. In this course, students will learn how to inform, persuade, and attract attention by creating and organizing the elements of typography, images, and white space. Classes are a dynamic mixture of instruction/production, lively discussion, computer work, and individual projects. Students will complete a variety of authentic projects that include but are not limited to the design of posters and infographics. They will gain a solid foundation in the use of Adobe Illustrator, Photoshop, and InDesign. This course is a complement to the Journalism and Yearbook courses.

## Journalism: Yearbook

ID: 46401 Credit: Elective
Grade: 9-12 Length: Year
Prerequisite: None
Note: Limited enrollment. Priority will go to students who have completed a graphic design course or have equivalent knowledge.

Enjoy research, writing, photography, and/or layout design? Want to apply academic skills to real- world assignments? Ever dreamed of seeing your work in print? Then join the class that
creates the Islander, the official photo journalistic publication covering a year in the life of SAS. This course is a dynamic mixture of hands-on instruction/production, lively discussion, computer and camera work, individual and group projects and adrenaline-pumping deadlines. In addition to learning yearbook publishing skills, students will also develop a sense of time management, workplace ethics, and leadership finesse. Some after school and weekend hours are required to cover school events and meet deadlines. Because this course has limited enrollment and requires a certain number of students in each of the four grades, some students requesting the course may not be able to take it. This course may be repeated for credit. Those who repeat will be expected to take on leadership and mentorship roles.

## FILM AND PHOTOGRAPHY

## Filmmaking

ID: $46404 \quad$ Credit: Visual/Performing Arts Grade: 9-12 Length: Semester

## Prerequisite: None

The Filmmaking course at SAS introduces students to the emerging accessibility of quality moviemaking by breaking down the process into its essential components-screenwriting, cinematography, sound design, and editing. Through academic study and practical exercises, we build upon student appreciation for the language and conventions of narrative filmmaking by creating short film pieces, both individually and as collaborative production crews. Course content is scaffolded to allow practical experimentation in each phase of the filmmaking process. Areas of focus include narrative structure, developing and pitching visual stories, manipulation of photographic equipment, professional audio recording, sound design, and continuity-style editing. The course is open to all high school students in grades 9-12 but may not be repeated for credit.

## Advanced Filmmaking

ID: 46406 Credit: Visual/Performing Arts
Grade: 10-12 Length: Semester
Prerequisite: Filmmaking
Note: This course may be repeated for credit.
The Advanced Filmmaking course pushes the aspiring movie maker to grow more fluent in the specific language of film. SAS has invested in top-of-the-line cinematographic gear that
empowers advanced students to work with the real-world tools of modern filmmaking. Expanding beyond the run-and-gun practices of the introductory course, Advanced Filmmaking emphasizes heavier pre-visualization, directorial skill, lighting and art design, motivated camera work, and an ever-expanding proficiency in the editing room. Students create short films of increasing technical and artistic sophistication and, through individualized study, tackle a discreet principal role on a production crew. At the end of the semester, the products of the course will be screened publicly-here at SAS and in student film festivals around the world. Like its craft, Advanced Filmmaking requires a dedicated passion and time commitment on the part of the filmmaker. The course is open to students in grades 10-12 who have completed Filmmaking (or an equivalent course elsewhere, with instructor approval). Advanced Filmmaking may be repeated for credit, whereby students elect a different primary area of focus (1. Writer, Director, Producer; 2. Cinematographer, Lighting Designer, Art Director; or 3. Editor, SoundDesigner, Postproduction Artist) to explore more deeply the many facets of cinematic storytelling.

## Digital Photography

ID: $46519 \quad$ Credit: Visual/Performing Arts Grade: 9-12 Length: Semester
Prerequisite: None
Note: A student-owned digital camera is recommended but not required.

This course will introduce students to the limitless possibilities of image making in the digital age. Students will learn the fundamental concepts of a camera and skills related to digital photography. This is a project-based course in which students integrate the concepts of art and design into a series of assignments using Adobe Photoshop. Topics will include: portrait, image editing workflow, composite imaging, methods of printing and presentation of digital images. Students will submit prints for exhibition as well as prepare and present a portfolio of their work in the form of a Google website.

## Advanced Digital Photography

ID: $46521 \quad$ Credit: Visual/Performing Arts<br>Grade: 9-12 Length: Semester

Prerequisite: Digital Photography
Note: A student-owned digital camera is recommended but not required. This course may be repeated for credit as students have the freedom to choose topics that are relevant to their own interests.

Advanced Digital Photography is designed as a continuation of the current semester-long Digital Photography course. The purpose of this second course is to provide motivated students with the opportunity to expand on the knowledge and skills they acquired in Digital Photography. This is a project-based course, which seeks to challenge the student's creative and technical skills through the creation of both "straight" and manipulated digital images. Topics to be covered will include advanced digital camera skills using a DSLR camera, advanced Photoshop skills as well as the use of several other digital image and multimedia software. Throughout the course, students will submit prints for exhibition as well as prepare and present a portfolio of their work in the form of a Google website.

## Media Arts: Broadcast Filmmaking Studio 41

ID: $46410 \quad$ Credit: Visual/Performing Arts Grade:10-12 Length: Year
Prerequisite: None
Studio41—along with its more widely-known news and entertainment show First Take-has expanded to become the centerpiece of student film and media production in the SAS high school. If you're eager to turn creative narrative concepts into visual storytelling as the director and producer of your own web series, this course will provide you with a platform. Are you looking to sharpen your skills in the areas of screenwriting, newswriting, and dialogue creation? Here's your opportunity to dive more deeply into the prose of journalism and storytelling. Do you long to ramp up your cinematic and editing skills and roll out highly visual media at a fast, deadline-driven pace? The Studio41 arena guarantees a broad and enthusiastic audience for your film work.

In the high school, the ideation, creation, and distribution of short films, interviews, student profiles, original series, and a wide array of live streams for sports and special events are managed, in part, through this newly-branded course offering. Media Arts: Broadcast Filmmaking hopes to channel the talents of a wide range of students with various levels of experience
in investigative journalism, screenwriting, direction, acting, graphic design, and technical filmmaking. While student assessment is based on individual performance and output, students (or, rather, staff members) work collaboratively, across multiple roles, to create and publish our collective commentary on events, trends, and points of student interest resonating within the school or around the world. Though not required, filmmaking experience (such as through the introductory or advanced filmmaking courses at SAS) is highly recommended. This course is open to interested students in grades 10-12 and may be repeated for credit.

## ADVANCED STUDIES OPTIONS

## AP Drawing

ID: $46111 \quad$ Credit: Visual/Performing Arts Grade: 10-12 Length: Year
Prerequisite: Studio Art
Note: This course has an additional grade point weighting of 0.5 .
The Drawing portfolio is designed to address a very broad interpretation of drawing issues and media. Light and shade, line quality, rendering of form, composition, surface manipulation, and illusion of depth are drawing issues that can be addressed through a variety of means, which could include painting, printmaking, mixed media, etc. Abstract, observational and inventive works may demonstrate drawing competence. The range of marks used to make drawings, the arrangement of those marks, and the materials used to make the marks are endless. Photography, digital recordings, digital imaging, photocopies of work, and three-dimensional work may not be submitted for the Drawing Portfolio. Students will be prepared for and strongly encouraged to sit for the AP exam in May.

## AP 2-D Art \& Design

## ID: $46112 \quad$ Credit: Visual/Performing Arts Grade: 10-12 Length: Year

Prerequisite: Studio Art or acceptable portfolio
Note: This course has an additional grade point weighting of 0.5.

This portfolio is intended to address two dimensional (2D) design issues. Design involves purposeful decision-making about how to use the elements and principles of art in an integrated way. The principles of design articulated through the visual elements help guide artists in making
decisions about how to organize the elements on a picture plane in order to communicate content. Strong design is possible whether one uses representational, abstract, or expressive approaches to make art. For this portfolio, students are asked to demonstrate mastery of 2D design through any two - dimensional medium or process, including but not limited to, graphic design, digital imaging, photography, collage, fabric design, weaving, illustration, painting and printmaking. Students will be prepared for and strongly encouraged to sit for the AP exam in May.

## AP 3-D Art \& Design

ID: 46113 Credit: Visual/Performing Arts Grade: 10-12 Length: Year
Prerequisite: Studio Art or Ceramics 3 or acceptable portfolio
Note: This course has an additional grade point weighting of 0.5 .

This portfolio is intended to address sculptural issues. Design involves purposeful decisionmaking about using the elements and principles of art in an integrative way. In the 3D Design portfolio, students are asked to demonstrate their understanding of design principles as they relate to depth and space. The principles of design (unity/variety, balance, emphasis, contrast, rhythm, repetition, proportion/scale, figure/ground relationship) can be articulated through visual elements (mass, volume, color/ light, form, plane, line, texture). For this portfolio, students are asked to demonstrate mastery of 3D design through any three-dimensional approach, including, figurative or non-figurative sculpture, architectural models, metal work, ceramics, and three-dimensional fiber arts. Students will be prepared for and strongly encouraged to sit for the AP exam in May.

## AT Visual Arts Collaborative Creation

ID: $46120 \quad$ Credit: Visual/Performing Arts
Grade: 11-12 Length: Semester
Prerequisite: Studio Art, Ceramics 3, Adv. Digital Photography, or Adv. Film
Note: The Advanced Topic (AT) designation indicates a course is a university level course, putting it at or above the level of a traditional Advanced Placement (AP) course. This course has an additional grade point weighting of 0.5 .

AT Visual Arts Collaborative Creation (ATVA Collaborative Creation) is designed for students to explore and engage with art from a variety of contexts and media. Students will deepen their understanding of the visual arts process by working collaboratively with their peers. As

## SINGAPORE AMERICAN SCHOOL

a team, students will be challenged to create work that meets the needs of site and purposespecific spaces within the school and the greater community. They will explore consensus-seeking through ideation, investigation, and research of relevant art, artists, and processes to put their knowledge and understanding into practice. This course enables students to learn not only about visual arts from various cultural contexts, but also about the importance of making work that is balanced in its group dynamic and personal contributions with an informed awareness of the impact of their work.

## AT Visual Arts Catalyst

ID: $46121 \quad$ Credit: Visual/Performing Arts
Grade: 11-12 Length: Semester
Prerequisite: Studio Art or Ceramics 3 or ATVA Collaborative Creation
Note: Completing this course is one of the ways in which a student may fulfill the Catalyst graduation requirement. The Advanced Topic (AT) designation indicates a course is a university level course, putting it at or above the level of a traditional Advanced Placement (AP) course. This course has an additional grade point weighting of 0.5 .

AT Visual Arts Catalyst (ATVA Catalyst) is designed for students to explore and engage with art and media from a variety of contexts. Students will deepen their understanding of design, practice, and creation through the independent development of artwork that is thrilling, daunting, and important. Students have a free choice to identify, select and explore artists, artworks, and cultural contexts that interest and motivate them. They will make decisions about what is relevant and useful for their own investigations and how to put their knowledge and understanding into practice. The ATVA Catalyst course enables students to learn not only about visual arts from various cultural contexts, but also about the importance of making work that is personal, and informed with an awareness of the impact their work and ideas may have on others within the world.

## PERFORMING ARTS



Singapore American School offers a number of options in the performing arts to meet the needs and interests of all students.

In the performing arts, students are offered courses in instrumental and vocal music, dance, and theater. These classes and ensembles are geared for every level of experience and ability. Beginning and advanced courses give students superb performance opportunities with specialty classes available for students with greater interest in music. As a result, some courses require an audition prior to enrollment so that performing ensembles can best meet the needs of all students.

Credits earned in Visual \& Performing Arts fulfill the department specific minimum graduation requirements (except in the case of Journalism: Yearbook which serves as an elective credit).

## THEATRE

## Theater: Stagecraft - Tech

ID: $46544 \quad$ Credit: Visual/Performing Arts
Grade: 9-12 Length: Semester
Prerequisite: None
Stagecraft covers the technical aspects of theater productions. Student assignments and projects will involve three topic areas: theater technology including set and prop design and construction, stage lighting, and theater sound systems for live performance. Projects in each of these areas will provide students with knowledge and hands-on experience with technical equipment used in theaters. All student work that involves construction and work with electrical equipment will include proper safety instruction. All students must follow safety guidelines. This course can be repeated for credit.

## Theater: Production - Acting

ID: $46305 \quad$ Credit: Visual/Performing Arts Grade: 9-12 Length: Semester
Prerequisite: None
The ensemble is the foundation supporting all our work in theater. Students engage in a wide variety of ensemble and theater exercises throughout the semester. They develop fundamental acting skills through scene work and acting exercises. Students also begin the process of creating original work. This class can be used as the prerequisite for Advanced Production.

## Theater: Advanced Production

| ID: 46306 | Credit: Visual/Performing Arts |
| :--- | :--- |
| Grade: 10-12 | Length: Semester |

Prerequisite: Any theater course
Students work in small and full-class ensembles creating and rehearsing original pieces of theater. This work is presented as part of the Theatre Festival in April, so there is a minimal amount of after-school rehearsal required. This course is the prerequisite for the Advanced Topic Performing Arts course.

## Theater: Improvisation

ID: $46310 \quad$ Credit: Visual/Performing Arts
Grade: 9-12 Length: Semester
Prerequisite: None
Contrary to popular belief, Improvisation performers do not just 'make it all up' on the spot. There are skills and structures providing
the springboard for entertaining improvisation. Students will develop these skills and performance forms in a workshop process emphasizing collaboration and play. This course can serve as the prerequisite for Advanced Improvisation and Advanced Production.

## Theater: Advanced Improvisation

ID: $46314 \quad$ Credit: Visual/Performing Arts
Grade: 10-12 Length: Semester
Prerequisite: Theater: Improvisation
Building on skills learned in Improvisation, students will work towards 'long form' performance. The ensemble improvises a 20-30 minute set based on prompts from the audience. The class will perform to an audience of their peers on a regular basis. This course can be repeated for credit.

## Musical Theater: History and Production

ID: 46226 Credit: Visual/Performing Arts
Grade: 9-12 Length: Semester
Prerequisite: None
Note: Will be offered in 2024-25. May not be offered in 2025-26

This course provides an in-depth study and practical application of musical theater. Class time is equally divided between a survey style examination of the history and structure of the American Musical and writing, rehearsing, and performing an original musical. No prior experience is necessary but students must be willing to try all aspects of the modern musical.

## Theater: Sketch Comedy

ID: 46316 Credit: Visual/Performing Arts
Grade: 10-12 Length: Semester
Prerequisite: Theater: Improvisation or Theater: Production
Note: Will not be offered in 2024-25. May be offered in 2025-26.

Students will create sketch comedy scenes for live performance and filming. They will use improvisation at every stage and in all aspects of writing sketches. This includes developing characters, finding the funny, exploring relationships, and coming up with a good ending. This class is your first step to being hired by SNL!

## DANCE

Note that all dance courses can be taken for either a Visual/Performing Arts credit OR a PE credit (not both).

## Dance I - Introduction to Dance

ID: $48002 \quad$ Credit: PE or Visual/Performing Arts Grade: 9-12 Length: Semester
Prerequisite: None
This course is designed for any student who would like to develop confidence and the ability to dance either for fun or as a performer. Students will learn to develop personal movement vocabularies and performance skills by exploring a range of styles and dance technique. Students will learn to respond to stimuli to develop choreography in groups. They will develop these skills by exploring the elements and choreographic devices of dance and learning to reflect and analyze throughout the process. The course is made up of a range of both practical and written work. The concepts covered in dance education class are different to what is often covered in a studio technique class, and the two types complement each other. Students will perform for each other in class and have the opportunity to take part in semester dance shows should they choose to do so. All students are required to take Dance I before Dance II and III to ensure learning is aligned to standards and prerequisite concepts. This includes students with previous dance experience as concepts and standards covered in non-curricular and/or external dance classes vary.

## Dance II

## ID: 48003 Credit: PE or Visual/Performing Arts Grade: 9-12 Length: Semester

## Prerequisite: Dance I

Dance II is a course designed for students who have an interest in dance and wish to continue their dance education. This course aims to further develop technique, performance, physical skills and choreographic skills. Students will be asked to create more in-depth pieces of choreography that use more complex choreographic concepts which will be covered throughout the semester. They will learn to select and use choreographic devices, structures, processes to develop and give form to dance ideas based around site specific dance and historical contexts. Students will learn and perform a range of short dances of different styles and perform in a full class dance piece. The course is made up of both practical and written
work and students will learn to reflect on and describe how choreography communicates ideas, feelings, moods, and experiences. All Dance II students are required to participate in scheduled dress rehearsals and the end of semester show, including after school and weekends.

## Dance III

ID: 48004 Credit: PE or Visual/Performing Arts Grade: 9-12 Length: Semester

## Prerequisite: Dance II

This course allows students to continue their technical training in dance, while offering them more opportunities to explore choreography and performance. The course will extend skills in the vocabulary, practices and technologies of selected dance genres and styles where students will perform in the semester show. Students will continue to develop choreographyskillsby creating solo or group dance works, using choreographic processes, devices, structures and technologies to communicate choreographic intentions based on social issues and the creation of a dance film. The course is made up of both practical and written work and students will continue to learn how to describe, explain and respond to the ways that dance uses elements, devices, structures, performance skills and production technologies to communicate images, themes, feelings and moods. Dance III will prepare students for the Dance Performance course should they wish to audition for that course. All students are required to take Dance I before Dance II and III to ensure learning is aligned to standards and prerequisite concepts. This includes students with previous dance experience as concepts and standards covered in non-curricular and/or external dance classes vary.

## Dance Performance

## ID: $48005 \quad$ Credit: PE or Visual/Performing Arts Grade: 10-12 Length: Year

Prerequisite: Audition (must also have completed Dance III and taught in the after-school Middle School Dance Program).

This course is designed for the serious dancer who has had dance training and would like to experience choreographing and performing more intensely. Students will continue learning and working on dance techniques and performance skills in a range of genres.. They will also learn more about choreography, dance design, choreographic devices and overall dance production. They will be expected to work as a team with guidance to teach, stage and direct
their own dances for the shows in both semester 1 and semester 2 . Students will be asked to critique and evaluate their own and other dancers' choreography and performances in more depth using appropriate terminology. Students will be expected to rehearse at least three afternoons each week (4:15-6:00 PM), increasing to daily rehearsals prior to the show. They will be expected to attend all scheduled rehearsals and participate in school performances as well as attend community performances. Some costs may be incurred for the purchase of costumes and shoes.

## STRINGS

## Concert Strings

## D: $46213 \quad$ Credit: Visual/Performing Arts

Grade: 9-12 Length: Year
Prerequisite: Experience with a string instrument Note: This course may be repeated for credit.
Fee: Performance attire S\$50-\$150. Instrument rental at $S \$ 200$ per year if required

Concert Strings is designed to help students with one to three years experience playing a stringinstrument to prepare for String Ensemble. This is an ideal setting for the string student who would like to switch instruments (i.e., violin to viola or cello to double bass). Special consideration will be devoted to developing technique, with particular emphasis placed on shifting, facility in the upper positions, developing a mature vibrato, and more advanced bow technique. Students will be exposed to a wide range of styles, including: classical, folk, jazz, and rock. The history of orchestral music, string instruments, and the general maintenance of the instrument will also be covered. All students are required to attend all scheduled dress rehearsals, performances, including after school or weekends.

## Chamber Strings

ID: $46229 \quad$ Credit: Visual/Performing Arts
Grade: 9-12 Length: Year

## Prerequisite: Audition

Note: This course may be repeated for credit.
Fee: Performance attire S\$50-\$150. A limited number of instruments are available for rental at $\$ \$ 200$ per year.

Chamber Strings is geared for the budding virtuoso who is very serious about music, and wants to take their performance to the highest level (think... "Instrumental Music AP"). The instrumentation for this ensemble will be set at

12 violins, 4 viola, 4 cello and 2 bass. Placement in this prestigious ensemble will be by rigorous audition stressing intonation and musicality. The demanding repertoire will be the catalyst for understanding the stylistic characteristics of music throughout the ages. The smaller size of this group will allow students to strive for a very refined, articulate performance standard, and exploration of the various tone colors possible on a stringed instrument. All students are required to attend all scheduled dress rehearsals, performances, including after school or weekends.

## String Ensemble

ID: $46209 \quad$ Credit: Visual/Performing Arts Grade: 9-12 Length: Year
Prerequisite: Audition
Note: This course may be repeated for credit.
Fee: Performance attire S\$50-\$150. A limited number of instruments are available for rental at S\$200 per year.

String Ensemble is for the advanced student who is serious about music performance. Placement in this ensemble is by audition only and will consist of three octave scales, prepared repertoire and sight-reading. Students will improve their individual technique as well as learn about the theory, style and form of music through the study and performance of quality literature. All students are required to attend all scheduled dress rehearsals, performances, including after school or weekends.

## BAND

## Concert Band

ID: $46202 \quad$ Credit: Visual/Performing Arts
Grade: 9-12 Length: Year
Prerequisite: Intermediate to advanced ability on a band instrument.
Note: This course may be repeated for credit.
Fee: Performance attire S\$50-\$150. A limited number of instruments are available for rental at $\$ \$ 200$ per year.

Concert Band is open to all students who have had previous experience on a band instrument. The band will perform in concerts during the year, playing a variety of musical styles ranging from popular to classical. All Concert Band members are required to attend all scheduled dress rehearsals, performances, including after school or weekends.

## Jazz Improvisation

| ID: 46217 | Credit: Visual/Performing Arts |
| :--- | :--- |
| Grade: 10-12 | Length: Year |

Prerequisite: Successful audition to Wind Ensemble and teacher recommendation.
Note: This course may be repeated for credit.
Fee: Performance attire S\$50-\$150. A limited number of instruments are available for rental at $\$ \$ 200$ per year.

Jazz Improvisation is offered to advanced musicians seeking to further their knowledge and skill in the jazz idiom. Students will study basic chords, scales and patterns used in improvisation, further develop small ensemble and combo playing skills, and explore a variety of jazz standards. Students in Jazz Improvisation will perform with both the Wind Ensemble and the HS Jazz Band. This is a fall semester course, and students in Jazz Improvisation will be enrolled in Wind Ensemble during the spring semester. Students interested in enrolling in Jazz Improvisation must audition successfully for Wind Ensemble and subsequently request the approval of the Band Director. All students are required to attend all scheduled dress rehearsals, performances, including after school, evenings or weekends.

## Symphonic Band

ID: $46210 \quad$ Credit: Visual/Performing Arts Grade: 9-12 Length: Year
Prerequisite: Audition.
Note: This course may be repeated for credit.
Fee: Performance attire $\mathbf{S} \$ 50-\$ 150$. A limited number of instruments are available for rental at $\$ \$ 200$ per year.
Symphonic Band is an audition-based group for intermediate to advanced musicians who wish to challenge their skills with more difficult music. The band will perform in four major concerts during the year, playing a variety of musical styles ranging from popular to classical. All Symphonic Band members are required to attend all scheduled dress rehearsals, performances, including after school or weekends.

## Wind Ensemble

ID: $46208 \quad$ Credit: Visual/Performing Arts
Grade: 9-12 Length: Year
Prerequisite: Audition.
Note: This course may be repeated for credit.
Fee: Performance attire S\$50-\$150. A limited number of instruments are available for rental at $\$ \$ 200$ per year.

Wind Ensemble is a very advanced band course for serious musicians who wish to challenge their skills with more difficult music. They play a varied repertoire of classical and popular music and will be encouraged to do solo and small ensemble performances as well. The Wind Ensemble represents the school in the community through concerts and programs. All Wind Ensemble members are required to attend all scheduled dress rehearsals, performances, including after school, evenings or weekends.

## VOCAL MUSIC

## Concert Choir - Chorale

ID: 46203/46205 Credit: Visual/Performing Arts Grade: 9-12

Length: Semester/Year
Prerequisite: None
Note: This course may be repeated for credit.
Fee: Performance attire S\$50-\$150.
The SAS Chorale (Concert Choir) is an SATB choir that will sing a wide variety of choral repertoire both in the large group and in smaller ensembles. Concert Choir - Chorale may consist of two ensembles: Chorale and Chorale - Treble. Students will advance their skills while learning about different musical styles through music prepared for public performance. From this choral experience, students will have the opportunity to develop an excellent level of musicianship and will refine their vocal techniques. The Chorale represents the SAS community through various concerts and programs, sometimes as many as three or four per semester. Chorale members will have the opportunity to participate in the Annual SAS Music Festival, Collage, Solo/Ensemble Event and the Biennial Masterworks Concert. Students choosing this course may take it for just one semester (ID: 46203) or for the full year (select both ID: 46203 and 46205). In order to be eligible to audition for SAS Singers, this course must be taken for the whole year the year of the audition. All Chorale members are required to attend all scheduled dress rehearsals and/or performances, including after school or weekends.

## Choral Ensemble - Chanterie

ID: $46212 \quad$ Credit: Visual/Performing Arts
Grade: 10-12 Length: Year
Prerequisite: None
Note: This course may be repeated for credit.
Fee: Performance attire S\$50-\$150.
The SAS Chanterie is a choral community made up of treble voices that will sing a wide variety of choral repertoire both in the large group and in smaller ensembles. Students will advance their skills while learning about different musical styles through music prepared for public performance. From this choral experience, students will have the opportunity to develop an excellent level of musicianship and will refine their vocal techniques. The Chanterie represents the SAS community through various concerts and programs, sometimes as many as 3-4 per semester. Chanterie members will have the opportunity to participate in The Annual SAS Music Festival, Winter Collage, Solo/Ensemble Event, and the Biennial Masterworks Concert. All Chanterie members are required to attend all scheduled dress rehearsals and/or performances, including after school or weekends.

## SAS Singers

ID: 46206 Credit: Visual/Performing Arts
Grade: 10-12 Length: Year
Prerequisite:Audition (must also have completed 1 continuous year of SAS high school choir during the year of the audition).
Note: This course may be repeated for credit.
Fee: Performance attire S\$50-\$150.
SAS Singers is a small ensemble of selected musicians who wish to participate in a variety of musical performances. They will learn to analyze music, develop choral techniques, recognize musical styles, and demonstrate movement to music (choreography). They will sing many genres of music including jazz, popular and madrigal music as well as top-level choral repertoire. Each member will also be expected to function as an integrated choral member within the other two choirs for major classical works. The Singers frequently represent the school in the community, sometimes 5-8 times per semester. SAS Singers have one required evening rehearsal per week.

# ADDITIONAL MUSIC COURSES 

## Introduction to Guitar

ID: $46214 \quad$ Credit: Visual/Performing Arts<br>Grade: 9-12 Length: Semester

Prerequisite: None
Note: Offered each year. Students should provide their own guitars (preferably a classical instrument); there are a limited number of school instruments available for rent at S\$50 per year.

Introduction to Guitar is designed for the beginning guitarist who wants to learn the fundamentals of guitar technique in a classroom setting. Students will be exposed to a wide range of styles, including: classical, folk, jazz, and rock. The history of the guitar, what to look for when buying a guitar, along with tuning and general maintenance of the instrument will also be covered. Students will learn to read standard notation and tablature as well as strategies for reading rhythm patterns. This class will equip students with the skills necessary for a lifetime of enjoyment on this beautiful and practical instrument.

## Advanced Guitar

ID: 46218 Credit: Visual/Performing Arts
Grade: 9-12 Length: Semester
Prerequisite: Successful completion of Introduction to Guitar or audition.
Note: Offered each year. Students should provide their own guitars (preferably a classical instrument); there are a limited number of school instruments available for rent at $\mathrm{S} \$ 50$ per year.

Advanced Guitar is a one-semester, elective course offering intermediate to advanced instruction on the guitar. Students in this course will improve their skill in open, power and moveable (barre) chords, using a variety of accompaniment styles. Students will be exposed to a wide range of quality literature designed to improve overall technique and musicianship. We will take a more independent study approach including exposure to the bass guitar, electric guitar, and drum kit. Think "School of Rock."

## ADDITIONAL MUSIC COURSES

## AT Performing Arts \& Catalyst

ID: 46325 (Dance) / 46326 (Music) / 46327 (Theater)
Credit: Visual/Performing Arts
Grade: 12 Length: Year
Prerequisite: Completion of three courses in the performance discipline and completion of application process detailed below. Specific strands may also include course prerequisites.
Note: Completing this course is one of the ways in which a student may fulfill the Catalyst graduation requirement. The Advanced Topic (AT) designation indicates a course is at university level, putting it at or above the level of a traditional Advanced Placement (AP) course. This course has an additional grade point weighting of 0.5.

This course provides students with opportunities to create and engage with university-level performance experiences. Students working within one of the disciplines of Dance, Drama, Vocal or Instrumental Music will fulfill requirements specific to that discipline. These include: guided research, exploration of methodologies, development of a performance, and in depth reflection. The application process is as follows: a) students audition as per usual for higher level performance groups by March, b) upon passing the audition, students submit a written application, and c) applicants are vetted by a Performing Arts Teacher panel in April. All applicants must be rising seniors.

There are three strands within AT Performing Arts:

1. The Dance strand is designed for the serious dancer who has had sufficient dance training and would like to study choreography and production aspects more intensely. Students will continue to be part of the Dance Performance class and the two semester productions, and will also engage in guided research, exploration of methodologies, development of a performance, and in-depth reflection.
2. The Music strand is for serious music students. AT music students will have the opportunity to expand their skills in solo performance, deep artistic reflection and artistic collaboration across the performing arts. In addition, ATPA musicians will enroll in online courses designed to build skills and knowledge in music analysis, theory and history.
3. The Theater strand requires students to work collaboratively to create a piece of original theater and has a prerequisite of Advanced Theater Production. Students will assume positions of leadership in the ensemble: creators, designers,
and directors, as well as performers. They will work in ensembles to examine and develop ideas to generate theatrical material for performance. AT Theater students must be enrolled in a theater course both semesters of their senior year.

Please note that during the school year, AT Performing Arts students across disciplines meet weekly to conduct guided research, explore methodologies, develop performances, establish connections with artistic advisors, and engage in in-depth reflection.

PHYSICAL \& HEALTH EDUCATION


Note:

* This health course is a graduation requirement.

Students must successfully complete three semester courses in Physical Education and one semester course in Health Education (Life Skills \& Human Development). Students may repeat a PE course for an elective credit, but a repeated course may not be used to fulfill the PE graduation requirement. Students may not be enrolled in more than one PE course per semester. Dance course offerings may be taken for either PE credit or performing arts credit but not both and students need to select the type of credit at the time of registration. All students in physical education classes are encouraged to participate actively in physical fitness, conditioning, and aerobic activities on a regular basis. Students will be assessed on course specific content and Active Class Engagement (ACE).

Technology is integrated, where applicable, into the Physical and Health Education curriculum. The department adopts relevant applications as they become available. Video recording of skills development and student performances are used in providing feedback on learning.

## DANCE

These courses may be taken for either PE credit or Visual/Performing Arts credit, but not both. Students need to select the type of credit at the time of registration.

## Dance I - Introduction to Dance

ID: $48002 \quad$ Credit: PE or Visual/Performing Arts Grade: 9-12 Length: Semester

Prerequisite: None
This course is designed for any student who would like to develop confidence and the ability to dance either for fun or as a performer. Students will learn to develop personal movement vocabularies and performance skills by exploring a range of styles and dance technique. Students will learn to respond to stimuli to develop choreography in groups. They will develop these skills by exploring the elements and choreographic devices of dance and learning to reflect and analyze throughout the process. The course is made up of a range of both practical and written work. The concepts covered in dance education class are different to what is often covered in a studio technique class, and the two types complement each other. Students will perform for each other in class and have the opportunity to take part in semester dance shows should they choose to do so. All students are required to take Dance I before Dance II and III to ensure learning is aligned to standards and prerequisite concepts. This includes students with previous dance experience as concepts and standards covered in non-curricular and/or external dance classes vary.

## Dance II

ID: $48003 \quad$ Credit: PE or Visual/Performing Arts Grade: 9-12 Length: Semester
Prerequisite: Dance I
Dance II is a course designed for students who have an interest in dance and wish to continue their dance education. This course aims to further develop technique, performance, physical skills and choreographic skills. Students will be asked to create more in-depth pieces of choreography that use more complex choreographic concepts which will be covered throughout the semester. They will learn to select and use choreographic devices, structures, processes to develop and give form to dance ideas based around site specific dance and historical contexts. Students will learn and perform a range of short dances of different styles and perform in a full class dance piece. The
course is made up of both practical and written work and students will learn to reflect on and describe how choreography communicates ideas, feelings, moods, and experiences. All Dance II students are required to participate in scheduled dress rehearsals and the end of semester show, including after school and weekends.

## Dance III

ID: 48004 Credit: PE or Visual/Performing Arts Grade: 9-12 Length: Semester

## Prerequisite: Dance II

This course allows students to continue their technical training in dance, while offering them more opportunities to explore choreography and performance. The course will extend skills in the vocabulary, practices and technologies of selected dance genres and styles where students will perform in the semester show. Students will continue to developchoreographyskillsby creating solo or group dance works, using choreographic processes, devices, structures and technologies to communicate choreographic intentions based on social issues and the creation of a dance film. The course is made up of both practical and written work and students will continue to learn how to describe, explain and respond to the ways that dance uses elements, devices, structures, performance skills and production technologies to communicate images, themes, feelings and moods. Dance III will prepare students for the Dance Performance course should they wish to audition for that course. All students are required to take Dance I before Dance II and III to ensure learning is aligned to standards and prerequisite concepts. This includes students with previous dance experience as concepts and standards covered in non-curricular and/or external dance classes vary.

## Dance Performance

ID: 48005 Credit: PE or Visual/Performing Arts Grade: 10-12 Length: Year
Prerequisite: Audition (must also have completed Dance III and taught in the after-school Middle School Dance Program).
This course is designed for the serious dancer who has had dance training and would like to experience choreographing and performing more intensely. Students will continue learning and working on dance techniques and performance skills in a range of genres.. They will also learn more about choreography, dance design, choreographic devices and overall dance production. They will be expected to work as a
team with guidance to teach, stage and direct their own dances for the shows in both semester 1 and semester 2 . Students will be asked to critique and evaluate their own and other dancers' choreography and performances in more depth using appropriate terminology. Students will be expected to rehearse at least three afternoons each week (4:15-6:00 PM), increasing to daily rehearsals prior to the show. They will be expected to attend all scheduled rehearsals and participate in school performances as well as attend community performances. Some costs may be incurred for the purchase of costumes and shoes.

## FITNESS

## Fitness for the Body \& Mind

ID: 48024 Credit: Physical Education
Grade: 9-12 Length: Semester
Prerequisite: None
This course is designed to teach students the process of using exercise to not only challenge the body but also to stimulate the brain. Students will experience various exercise forms such as Yoga, Pilates, Drums Alive, Qi Kung, Tai Chi and other martial art disciplines. Students will challenge their balance, strength, flexibility, coordination and concentration through these disciplines as well as through fusion exercises such as Iron Yoga, Yo Chi, Yoga with stability balls, Pilates with BOSU and TRX. The objective of this course is to seek an alternative route to cognitive development by providing physical and mental challenges that may result in stronger focus, self-discipline, and ultimately, increased self-confidence.

## Group Fitness

ID: 48001 Credit: Physical Education
Grade: 9-12 Length: Semester
Prerequisite: None
This course emphasizes strength and fitness conditioning through a variety of group fitness related exercises and workouts. It is designed to encourage intense and vigorous participation with a focus on the basic foundations of movement. Students will use a variety of fitness tools and equipment, including: BOSU, Kamagon balls, SMART boards, slastix bands, slingshots, suspension trainers, stability balls, medicine balls, slam balls, kettlebells, barbells, dumbbells, sandbells, sandbags, battle ropes, ladders, and hurdles. Students will learn to train like athletes and will learn exercises to increase strength,
endurance, coordination, flexibility and balance. Students will use heart monitors to better understand how to maximize their workouts for optimal health. Nutrition, kinesiology and fitness concepts will also be covered to enhance their knowledge of fitness education.

## Group Fitness II

ID: 48029 Credit: Physical Education
Grade: 9-12 Length: Semester
Prerequisite: Group Fitness
This course will provide students the opportunity to dive more deeply into the concepts of Movement Efficiency Training. In addition to applying these concepts for their own personal use, they will be able to safely design training programs for students during class time or through the 'House of Pain', a SAS after-school fitness club. Valuable information on motivational and cueing techniques, the principles of class design, creating a positive fitness experience, progressions and regressions for multi-level classes, exercise and movement selection, sequencing, choreography, program modifications, music and legal guidelines will also be explored in the course.

## Weight Training \& Conditioning I

ID: 48018 Credit: Physical Education
Grade: 9-12 Length: Semester
Prerequisite: None
This course is designed to meet the needs of students who demonstrate an interest in developing personal fitness skills and gaining knowledge of anatomy and physiology. The course introduces students to many aspects of physical fitness, weight training, and conditioning and their role in promoting strength, muscular endurance, cardiovascular endurance, agility and flexibility. Students will apply weight training and fitness concepts through the development of their own personal fitness program. Students will learn the proper use of the universal weight machine and free weights. Students will also become knowledgeable about various nutritional and weight control programs and will be able to analyze the effectiveness of each of the programs studied.

Weight Training \& Conditioning II<br>ID: $48019 \quad$ Credit: Physical Education<br>Grade: 9-12 Length: Semester<br>Prerequisite: Weight Training I

This course is designed to continue knowledge and skill in the components of physical fitness: strength, muscular endurance, cardiovascular endurance, agility and flexibility. The resistancetraining program includes: free weights, circuit training, flexibility instruction and aerobic activities. Theoretical instruction comes from a variety of sources including physiology texts, salient journals and teaching periodicals. The students' knowledge of this theoretical base, along with practical application, forms the core concepts of this offering. Students will be graded on both practice and theory.

## INDIVIDUAL ACTIVITIES

## Athletics <br> ID: 48017 Credit: Physical Education <br> Grade: 9-12 Length: Semester

Prerequisite: None
This course primarily focuses on "track \& field" based activities/events and is a multi-event training program. The goal is for students to be exposed to both running (sprinting \& longer distances) and field events (jumping \& throwing), to ensure broad-based training and skill development within diverse disciplines. The multi-event training approach enables students to achieve technical knowledge of events, as well as gain stamina and fitness simultaneously. Both written and physical assessments will conclude each unit, as well as a final summative at the end of the course. Due to the outdoor environment needed for learning, students must be able to participate outdoors.

## Climbing \& Adventure Training

ID: 48028 Credit: Physical Education
Grade: 9-12 Length: Semester
Prerequisite: None
This course is designed to introduce students to elements of adventure sports, specifically related to indoor and outdoor climbing and belaying. The semester is structured into two main elements: a) indoor bouldering and climbing and b) outdoor high elements challenge ropes course. Students will learn different types of knots and all the essential information needed to be safe and efficient climbers and belayers. Bouldering, belay-
work, assessing and climbing various routes, and clear and effective communication are skills that will be recurring throughout the semester, starting indoors and working our way to the high elements course outside. Due to the outdoor environment needed for learning on the high ropes course, students must be able to participate outdoors.

## Lifeguarding

ID: 48023 Credit: Physical Education
Grade: 9-12 Length: Semester
Prerequisite: Must be at least 15 years before the end of the course. Students must have strong swimming skills including: treading water and muscular strength and endurance.

Note: Enrollment is limited. Preference will be given to upper grades in the case of oversubscription.

The purpose of the Lifeguarding course is to teach lifeguards the skills and knowledge needed to prevent, recognize, and respond to aquatic emergencies and to provide care for injuries and sudden illnesses. Students may optin to receive the following certificates from Ellis \& Associates: Lifeguarding, First Aid, CPR and AED Administration. Please note that in order to meet the rigorous standards for these certificates, students may be required to attend some outside-of-school-hours sessions if they wish to receive all of the certifications. Students opting for certification through Ellis \& Associates will need to pay SGD 100 (certification/material costs) on successful completion.

Students will need to demonstrate aquatic efficiency by successfully completing a 300 m (12 lap) swim, 2 minute treading water (without use of hands) and dive brick retrieval test. If a student is unable to meet these standards, they will not be elligible for the Ellis \& Associates certification at the end of the course.

## Personal Defense \& Combatives

ID: 48027 Credit: Physical Education
Grade: 9-12 Length: Semester
Prerequisite: None
This course is designed to expose students to a variety of Mixed Martial Arts-type techniques and strategies that combine stand up and ground work related to personal defense and athletic training. It involves martial arts techniques from disciplines such as boxing, jiu jitsu, judo, krav maga, tae-kwon-do and wrestling. Students
will learn the basic elements of striking, kicking, takedowns, and ground defense work as well as mental strategies in a safe and controlled environment. Additionally students will learn self-defense principles and strategies on how to be safe and aware of potential dangers in their surroundings. The course will include both practical and theoretical work.

## SPORTS AND GAMES

Field Hockey, Softball, \& Modified Golf<br>ID: 48015 Credit: Physical Education<br>Grade: 9-12 Length: Semester<br>\section*{Prerequisite: None}

This course includes a variety of team based activities such as, field hockey, softball, and modified golf, with a focus on skill development and practical application of these skills in a diverse range of sporting contexts. The emphasis of the course is the development of personal responsibility and the importance of working collaboratively with others by promoting teamwork and effective communication. There is also a strong focus on adherence to rules and etiquette, along with safety practices and procedures, aiming to instill a sense of fair play and encouragement toward a lifelong pursuit of physical activity.

## Indoor Team Sports

ID: 48009 Credit: Physical Education
Grade: 9-12 Length: Semester
Prerequisite: None
The Indoor Sports course includes a variety of team based activities such as, basketball, volleyball, handball and indoor soccer, with a focus on skill development and practical application of these skills in a diverse range of sporting contexts. The emphasis of the course is the development of personal responsibility and the importance of working collaboratively with others by promoting teamwork and effective communication. There is also a strong focus on adherence to rules and etiquette, along with safety practices and procedures, aiming to instill a sense of fair play and encouragement toward a lifelong pursuit of physical activity.

## International Sports

ID: $48008 \quad$ Credit: Physical Education
Grade: 9-12 Length: Semester
Prerequisite: None
The International Sports course includes a variety of activities such as, tchoukball, cricket, ultimate frisbee and archery, with a focus on skill development and practical application of these skills in a diverse range of sporting contexts. The emphasis of the course is the development of personal responsibility and the importance of working collaboratively with others by promoting teamwork and effective communication. There is also a strong focus on adherence to rules and etiquette, along with safety practices and procedures, aiming to instill a sense of fair play and encouragement toward a lifelong pursuit of physical activity.

## Racquet Sports

ID: 48016 Credit: Physical Education
Grade: 9-12 Length: Semester

## Prerequisite: None

The Racquet Sports course includes a variety of activities such as, badminton, table tennis, pickleball and tennis, with a focus on skill development and practical application of these skills in a diverse range of sporting contexts. The emphasis of the course is the development of personal responsibility and the importance of working collaboratively with others by promoting teamwork and effective communication. There is also a strong focus on adherence to rules and etiquette, along with safety practices and procedures, aiming to instill a sense of fair play and encouragement toward a lifelong pursuit of physical activity.

Soccer, Flag Football \& Touch Rugby<br>ID: 48014 Credit: Physical Education<br>Grade: 9-12 Length: Semester<br>Prerequisite: None

The Outdoor Sports course includes a variety of team based activities such as, soccer, flag football, and touch rugby, with a focus on skill development and practical application of these
skills in a diverse range of sporting contexts. The emphasis of the course is the development of personal responsibility and the importance of working collaboratively with others by promoting teamwork and effective communication. There is also a strong focus on adherence to rules and etiquette, along with safety practices and procedures, aiming to instill a sense of fair play and encouragement toward a lifelong pursuit of physical activity.

## HEALTH EDUCATION

## Life Skills \& Human Development

ID: $48010 \quad$ Credit: Health
Grade: 10-12 Length: Semester
Prerequisite: None
This required health course has been designed to provide students with an opportunity to learn, discuss and explore timely topics relevant to their overall health and wellness. The main topics that will be covered are gender \& sexuality education, addictive substances, mental health, and healthy relationships \& consent. Its aim is to help students become aware of appropriate lifestyle decisions that will support the many challenges they face in their high school lives and beyond. This will be done through discussions in both small groups and whole classes, scenarios and guided reflection activities. Through the teaching and learning experiences, students will develop skills for navigating conflict and advocating for themselves and others. Open and mature attitudes are needed in order to participate in conversations around these social, emotional, and critical issues. This will be a hands-on, participation focused, application minded class.

## ADVANCED STUDIES

## AT Kinesiology

ID: $48000 \quad$ Credit: Physical Education
Grade: 11-12 Length: Semester
Prerequisite: None
Note: The Advanced Topic (AT) designation indicates a course is at university level, putting it at or above the level of a traditional Advanced Placement (AP) course. This course has an additional grade point weighting of 0.5.

This is a college level Physical Education course that focuses on the academic principles of human movement. It is designed to provide students with selected foundational knowledge in kinesiology.

Modules include basic anatomy, exercise physiology, biomechanics, motor behavior, sport and exercise psychology, and sociology. Students will have the opportunity to apply course content through a vareity of assessment protocols including inquiry-based learning, self-assessment opportunites along with more traditional strategies. This course aims to prepare students to pursue further studies in physical education and human movement.

## CATALYST



Catalyst is a culminating experience in which students apply their academic knowledge to real situations that are personally applicable. This entails using different skills than are sometimes required in regular academic courses at SAS. Catalyst is deliberately designed for students of all abilities and interests, and it is customized for all students to experience and to take ownership in a successful project process. Further, grading is based on process and not product, so what students choose for their project is less important than how they conduct their work. The successful completion of the Catalyst Project is a graduation requirement. It ensures that every SAS graduate will leave our school having immersed themselves in a personalized, experiential, educational experience and that they will have developed skills that are essential for their future.

There are five ways that students can fulfill their Catalyst graduation requirement.

## THE FIVE CATALYST OPTIONS

All five of the options below fulfill the Catalyst graduation requirement. There are some significant differences between them.

## 1. The SAS Catalyst Project

The Catalyst Project is a personalized course where students work with teachers who act as guides as students design, plan, and complete interest-based projects. Students focus on producing a meaningful outcome and are encouraged to dive deep into relevant content and knowledge. This course is for everyone - the program is built to inspire and assist students whether they already have a project idea or not. Optionally, the Catalyst Project can be extended into a second semester, or become a "HyperCatalyst," because the student's project requires greater resources and time.

## 2. AT Research \& Catalyst

After successfully completing AT Seminar, most of our students enroll in the year-long AT Research \& Catalyst. AT Research \& Catalyst asks students to deeply explore an academic topic, problem, or issue of individual interest with the expectation of producing a university level research paper and and having the opportunity to publish their work in an academic journal.

## 3. AT Performing Arts \& Catalyst

AT Performing Arts provides students with opportunities to create and engage with university-level performance experiences. Students working within one of the disciplines of Dance, Drama, Vocal, or Instrumental Music will fulfill requirements specific to that discipline. Students apply for the program. The application process is as follows:

- students audition as per usual for higher-level performance groups.
- upon passing the audition, students submit a written application.
- applicants are vetted by a Performing Arts teacher panel.

During the school year, AT Performing Arts students across disciplines meet weekly to conduct guided research, explore methodologies, develop performances, establish connections with artistic advisors, and engage in in-depth reflection.

## 4. AT Visual Arts Catalyst

AT Visual Arts Catalyst students have the opportunity to dig deep into an area of passion specific to a discipline or combination of disciplines that excite and thrill them. By developing their work through ideation and experimentation, students create a body of work and have the opportunity to showcase and share at the conclusion of the course with the community.

## 5. Quest

Quest is an immersive program that supports students in pursuing their curiosity and passion. Instead of taking traditional courses, students earn up to six credits through interdisciplinary projects that are personalized to their interests. The year culminates with a junior or senior project thesis paper, thesis talk, and thesis defense; successful completion of which fulfills the Catalyst graduation requirement. Please refer to the Quest section of this planning guide for more information.

# The SAS Catalyst Project 

D: 48509 / 48510<br>Grade: 11-12<br>Credit: Elective<br>Length: Semester<br>Prerequisite: None

Note: Completing this course is one of the ways in which a student may fulfill the Catalyst graduation requirement.
The SAS Catalyst project provides guidance, resources, and flexible scheduling for students to explore interests and pursue passions. Teachers act as guides as students take ownership for their learning. The learning aspirations of communication, collaboration, critical thinking, and creativity are emphasized, developed, and assessed. As students design, plan, and conduct their projects, they focus on producing a tangible outcome and dive deep into relevant content and knowledge. Often, students experience real world learning and problem solving in authentic contexts (e.g., interviews, work study, scientific research, internships). Students will be taught how to employ the rich regional and global professional network, starting with working with a mentor from a respective field or profession. The project scope is limited only by the student's imagination. Students who have a strong interest in a particular project may complete the Catalyst project as a junior; this would be especially true for students who are planning a heavier senior course load.

## AT Visual Arts Catalyst

ID: 46121 Credit: Visual/Performing Arts<br>Grade: 11-12 Length: Semester

Prerequisite: Studio Art, Ceramics 3, or ATVA Collaborative Creation

Note: Completing this course is one of the ways in which a student may fulfill the Catalyst graduation requirement. The Advanced Topic (AT) designation indicates a course is a university level course, putting it at or above the level of a traditional Advanced Placement (AP) course. This course has an additional grade point weighting of 0.5.

AT Visual Arts Catalyst (ATVA Catalyst) is designed for students to explore and engage with art and media from a variety of contexts. Students will deepen their understanding of design, practice, and creation through the independent development of artwork that is thrilling, daunting, and important. Students have a free choice to identify, select and explore artists, artworks, and cultural contexts that interest and motivate them. They will make decisions about what is relevant and useful for their own investigations and how to put their knowledge and understanding into
practice. The ATVA Catalyst course enables students to learn not only about visual arts from various cultural contexts, but also about the importance of making work that is personal, and informed with an awareness of the impact their work and ideas may have on others within the world.

## AT Performing Arts \& Catalyst

ID: 46325 (Dance) / 46326 (Music) / 46327 (Theater)
Credit: Visual/Performing Arts
Grade: 12 Length: Year
Prerequisite: Completion of 2.5 credits in the performance discipline and completion of application process detailed below. Specific strands may also include course prerequisites.

Note: Completing this course is one of the ways in which a student may fulfill the Catalyst graduation requirement. The Advanced Topic (AT) designation indicates a course is at university level, putting it at or above the level of a traditional Advanced Placement (AP) course. This course has an additional grade point weighting of 0.5.
This course provides students with opportunities to create and engage with university-level performance experiences. Students working within one of the disciplines of Dance, Drama, Vocal or Instrumental Music will fulfill requirements specific to that discipline. These include: guided research, exploration of methodologies, development of a performance, and in depth reflection. The application process is as follows: a) students audition as per usual for higher level performance groups by March, b) upon passing the audition, students submit a written application, and c) applicants are vetted by a Performing Arts Teacher panel in April. All applicants must be rising seniors.

There are three strands within AT Performing Arts:

1. The Dance strand is designed for the serious dancer who has had sufficient dance training and would like to study choreography and production aspects more intensely. Students will continue to be part of the Dance Performance class and the two semester productions, and will also engage in guided research, exploration of methodologies, development of a performance, and in-depth reflection.
2. The Music strand is for serious music students. AT music students will have the opportunity to expand their skills in solo performance, deep artistic reflection and artistic collaboration across the performing arts. In addition, ATPA musicians will enroll in online courses designed to build
skills and knowledge in music analysis, theory and history.
3. The Theater strand requires students to work collaboratively to create a piece of original theater and has a prerequisite of Advanced Theater Production. Students will assume positions of leadership in the ensemble: creators, designers, and directors, as well as performers. They will work in ensembles to examine and develop ideas to generate theatrical material for performance. AT Theater students must be enrolled in a theater course both semesters of their senior year.

Please note that during the school year, AT Performing Arts students across disciplines meet weekly to conduct guided research, explore methodologies, develop performances, establish connections with artistic advisors, and engage in in-depth reflection.

## AP CAPSTONE AND CATALYST

To receive the AP Capstone Diploma, students must successfully complete both AT Seminar and AT Research \& Catalyst. In addition, they must earn a score of 3 or higher on both the AP Seminar and AP Research exams, and earn a score of 3 or higher on four additional AP exams of their choosing. A student will typically take AT Seminar in the sophomore or junior year and AT Research \& Catalyst the following year. The AP Capstone Diploma is awarded by the College Board.

## AT Seminar

ID: $48520 \quad$ Credit: Elective
Grade: 10-12 Length: Year
Prerequisite: Semester I grade of A or higher in Humanities 9 is required to select this course in grade 10. Semester 1 grade of B+ or higher in English 10/American Studies is required to select this course in grade 11.

Note: AT Seminar requires independence, the ability to work with teams and groups, self-regulation and time management to be successful. This course has an additional grade point weighting of 0.5 .

The AT Seminar course is an inquiry-driven course that engages students in cross-curricular conversations that explore real-world topics and issues from multiple perspectives. Students learn to collect and analyze information with accuracy and precision in order to craft and communicate evidence-based arguments both in writing and in presentations to a live audience. Students also work collaboratively; a willingness to be a team player is vital to this course as students
will submit a team project to the College Board, which includes a team presentation. AT Seminar is year one of the AT Research \& Catalyst program; merging the AT Seminar/AT Research program with the Catalyst project allows students to reflect on their passions and strengths while they develop the skills that help them to think and write academically. Upon completion of the AT Seminar, students will be prepared for a research, performance, or innovation-based AT Research \& Catalyst experience the following academic year. This course has fully adopted the AP Seminar curriculum, and therefore, students will be eligible to take the AP Seminar exam in preparation for earning the AP Capstone Diploma.

## AT Research \& Catalyst

ID: 48515 Credit: Elective Grade: 11-12 Length: Year<br>Prerequisite: AT Seminar.

Note: Completing this course is one of the ways in which a student may fulfill the Catalyst graduation requirement. Like an AP course, this course has an additional grade point weighting of 0.5 .

AT Research \& Catalyst allows students to deeply explore an academic topic, problem, or issue of individual interest with the expectation of producing a university level research paper , presentation and oral defense. For example, students can dig deeper into a topic studied in an AP or AT course, work across academic areas on an interdisciplinary topic or study a new discipline of interest, perhaps one a student would like to study in college. The course begins with students developing a greater sense of self. As they explore their interests, students design, plan, and conduct qualitative and/or quantitative research and choose a methodology to address a potential research question. Ultimately, students hone in on a academic research question and work on an independent research project. Students utilize the learning aspiration as they document their processes and curate their scholarly work in a portfolio. In addition, students will be guided to operationalize their personal networks in order to establish mentorships and other forms of experiential network- based learning (collaborative research studies, internships, etc.). The course culminates in an academic paper of approximately 5000 words, an oral defense presentation of their research, and paper submission to an academic journal. This course has fully adopted the AP Research curriculum, and therefore, students will be eligible to recieve AP credit and be eligible for the AP Capstone Diploma.


## WHAT IS QUEST?

The SAS Quest Program is a full-day, year-long program for 11th and 12th graders that inspires a community of learners to pursue their passions through authentic personalized learning experiences and rigorous, yet meaningful academic work. Quest is an enhancement to SAS students' existing educational opportunities already available through our mainstream course offerings. Quest students earn four credits by engaging with interdisciplinary projects and institutional partnerships personalized to their interests. Additionally, every student in Quest engages in in-depth research by completing a thesis called the student-driven study (SDS), fulfilling the Catalyst graduation requirement. Students may choose to earn all, some, or no Advanced Topic credits for their Quest courses. Quest students are members of either an A-Day cohort or a B-Day cohort and take four courses on their Quest day. For example, a student in the A-Day cohort receives credit for four Quest courses all taken on their A-Day and has B-Day to take up to three classes outside of Quest.

Quest students begin the year with an international Launch Week trip the week prior to school starting. The Launch trip is compulsory as students begin their academic coursework during the trip. The trip builds the Quest community of learners and serves as a launching point for learning throughout the year. Students engage in team-building activities, outdoor education, and experiential learning. They also engage in the scientific investigation of tropical biodiversity and experience the region's rich cultural heritage. The estimated cost of the trip is $\$ 2,500$.

Experiential learning is the foundational approach to learning within the Quest program. The flexibility of the daily schedule is leveraged within Quest to build in more off-campus opportunities such as field trips, partnerships with industry and non-governmental organizations (NGOs) for authentic professional workplace learning experiences, academic mentoring with industry professionals, attending professional conferences, conducting fieldwork, and participating in service-learning. This all happens within a small, tight-knit learning community that feels like a family.

Quest begins accepting applications for the following school year on November 1 for Round 1. Round 2 opens at the start of Semester 2 and will close on March 1, 2024. Applications will be accepted until it reaches capacity; any applications received after it reaches capacity will be waitlisted.


## THE QUEST PILLARS

The program supports the learning of students by providing them with an innovative, high-quality educational experience that is anchored by the program's five pillars: (1) community of learners, (2) interdisciplinary approach, (3) experiential learning, (4) flexible schedule, and (5) personalized learning.

- Community of Learners: A small community that allows for close relationships, personalized learning, and daily mentoring.
- Interdisciplinary Approach: Learning experiences emphasize the application and synthesis of knowledge and the development of essential skills and dispositions from across the disciplines.
- Experiential Learning: Students learn best by doing in authentic settings, so Quest provides a variety of off-campus experiential learning opportunities through field trips and the partnerships program.
- Flexible Schedule: Students have more control over their schedule and will learn essential time management skills. The schedule and pacing are designed to empower students to take control over their learning process and develop strong time management and executive functioning skills.
- Personalized Learning: Units are tailored to students' strengths and interests. Assessments are meaningful and authentic, and encourage student choice and agency.


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Former Quest students have gone on to attend various universities around the world. Because of the strong community bonds that Quest members build, there is regular contact with former students who all attest to the positive impact of the skills developed in Quest:

Quest empowered me in many ways. Not only did the program bless me with foolproof time management skills and the ability to network with adults like a pro, but it also granted me the autonomy to truly discover what l'd like to do in the future. Through reading about my favorite topics, interning at a graduate-level research team from NUS Business School, and choosing a thesis topic, I was able to delve deep into my many interests and pick out the ones I genuinely enjoyed. The experience gave me time and support for thorough self-exploration and refinement. Now, fully equipped with professional skills and more insight into my endeavors, I have gained a head start to adulthood through the Quest program.

- Juliet Mao, Class of 2020

Quest alumni have also said that Quest has had a positive impact on their ability to manage independent time in university and that they have felt much more prepared for university than their peers.

If I had to describe Quest succinctly, it is a college experience fitted for high schoolers that gives them a headstart into the professional world.

- Kenneth Le, Class of 2023


## QUEST COURSE OVERVIEW

Students earn grades in Quest through the assessment of interdisciplinary projects and experiences and are scored using rubrics with the applicable standards from the Quest courses. So for one task a student may receive grades in Science, Math, English, and Social Studies. However, the transcript will still reflect the official course titles, the same as any SAS course. Quest students still receive a traditional transcript, same as any SAS student.

Grades for Quest courses are reported in PowerSchool the same way any SAS course reports grades, and will factor into a student's GPA, along with any other SAS courses a student is taking each semester.

|  | GREDIT | COURSES |
| :---: | :---: | :---: |
| QUEST COURSES <br> COURSES TAKEN ON THEIR QUEST DAY | ENGLISH | English: Composition \& Research * -OR- AT Research * <br> *Fulfills the Catalyst Graduation Requirement |
|  | MATH | Data Analysis \& Visualization -OR- AT Data Analysis \& Visualization |
|  | SCIENCE | Conservation \& Resource Studies -OR. AT Conservation \& Resource Studies |
|  | SOCIAL STUDIES | Society, Governance \& Civic Action -OR- AT Society, Governance \& Civic Action |
| SAS COURSES <br> GOURSES THE/R NON-QUEST DAY | SAS COURSE | Students select courses from the SAS Program Planning Guide |
|  | SAS COURSE | Students select courses from the SAS Program Planning Guide |
|  | SAS COURSE | Students select courses from the SAS Program Planning Guide |
|  | EAGLE BLOCK | Every student will have at least ONE eagle block on their non-Quest day |

Note:
Quest offers Advanced Topic (AT) or College Prep level courses, and an opportunity for AP Research submission, while maintaining access to all courses offered at SAS. The Advanced Topic (AT) level Quest courses have an additional 0.5 GPA weighting.

## CORE QUEST COURSES

## English: Research \& Composition

ID: $48525 \quad$ Credit: English
Grade: 11-12 Length: Year
Prerequisite: None
The Quest English course immerses students in the academic research process. Students will deeply explore an academic topic, problem, or issue of individual interest. Students will develop an understanding of research methodology, employ ethical research practices, and access, analyze, and synthesize information as they address a research question. Students will apply this understanding to design, plan, and conduct a year-long research-based investigation to address a research question. In addition to honing their research skills, the Quest English course empowers students to become captivating storytellers across various platforms. Through hands-on experiences, participants will master the art of crafting compelling narratives, delving into mediums such as writing and publishing on platforms such as Medium, LinkedIn, and Youtube engaging in digital storytelling, and refining their ability to deliver captivating presentations. This multifaceted approach ensures that students excel in rigorous academic research and emerge as dynamic communicators capable of sharing their findings with diverse audiences.

## Math: Data Analysis \& Visualization

## ID: 48534 Credit: Math

Grade: 11-12 Length: Year
Prerequisite: Geometry.
To receive credit in Math: Data Analysis \& Visualization, students are required to demonstrate their learning in interpreting categorical and quantitative data, making inferences, justifying conclusions, and using probability to make decisions. The focus of the course is on deeply understanding the core concepts of statistical analysis and interpreting data. Students will collect, organize, represent, analyze, and visualize data through programming language such as $R$.

## Science: Conservation \& Resource Studies

ID: 48536 Credit: Science<br>Grade: 11-12 Length: Year

Prerequisite: None
Students will explore environmental issues and areas of interaction among natural resources, population, energy, technology, societal institutions, and cultural values through an interdisciplinary lens. They will draw upon course concepts, skills, and community resources in the development of personalized projects. The course is oriented toward understanding the dynamic structure and function of complex systems within our society and the biosphere. Beyond fundamental concepts of ecology, students will study, analyze, and evaluate a range of environmental issues, both natural and humanmade, through the lens of sustainability. This course will challenge students to examine solutions for preventing and resolving environmental problems and will catalyze their active engagement through participation in experiential learning.

## Social Studies: Society, Governance, \& Civic Action

ID: $48538 \quad$ Credit: Social Studies Grade: 11-12 Length: Year

## Prerequisite: None

Students will delve into the characteristics and complexities of organizing societies and what it means to govern. Students will understand the role, responsibility, and limitations of citizens in maintaining, supporting, challenging, and changing how we effectively manage contemporary issues through civic engagement and the interplay between industry, civil society, and government. Quest students will co-create meaningful, authentic learning tasks that deepen their understanding of citizens' roles, examine their worldviews and notions of governance, and broaden their perspectives of what it means to participate in society. Power and the role industry and civil society play will be further examined through student-selected work and experiences off-campus. Students will engage in the work in authentic ways and create work intended for a professional audience.

## ADVANCED STUDIES OPTIONS

## AT English: Research \& Composition

ID: 48526 Credit: English<br>Grade: 11-12 Length: Year

Prerequisite: Semester I grade of $B$ or higher in any AP or AT English course or Semester I grade of B+ or higher in English 10 or American Studies
Note: Quest students who completed AT Seminar may choose to submit the thesis papers they produce in this course to the College Board for AP Research exam scoring. Quest will support these students to follow the AP Research guidelines. To earn the AP Capstone Diploma, students must earn three or higher scores on the AP Seminar and AP Research exams and four additional AP exams. The Advanced Topic (AT) designation indicates a course is at the university level, putting it at or above the traditional Advanced Placement (AP) course level. This course has an additional grade point weighting of 0.5 .
Please see above for a detailed description of English: Research \& Composition. Students wishing to earn Advanced Topic credit in English: Research \& Composition will practice narrative, oral communication, digital communication, and argumentative skills at a more rigorous level that demonstrates the in-depth application of these skills. Students who wish to earn Advanced Topic credit will individually be held to a higher standard of skill acquisition and will need to demonstrate a high level of skills performance.

## AT Math: Data Analysis \& Visualization

ID: $48535 \quad$ Credit: Math
Grade: 11-12 Length: Year
Prerequisite: Completion of Algebra II/Trigonometry or higher level math course with Semester I grade of B or higher; or Quest advisor's recommendation.
Note: The Advanced Topic (AT) designation indicates a course is at the university level, putting it at or above the additional Advanced Placement (AP) course level. This course has an extra grade point weighting of 0.5.

Please see above for a detailed description of Math: Data Analysis \& Visualization. Students who wish to earn Advanced Topic credit will individually be held to a higher standard of skill acquisition and will need to demonstrate a high level of data processing and analysis skills. Students are required to collect, organize, represent, analyze, and visualize their data through the use of programming language such as R. Students will work in partnership with the Quest advisors to also define their advanced learning objectives and how they go beyond the requirements of the college preparatory level to attain Advanced Topic credit.

## AT Science: Conservation \& Resource Studies

ID: $48537 \quad$ Credit: Science
Grade: 11-12 Length: Year
Prerequisite: Completion of a chemistry course with a grade of $B$ or higher; or completion of a physics course with a grade of $B$ or higher.

Note: The Advanced Topic (AT) designation indicates a course is at the university level, putting it at or above the additional Advanced Placement (AP) course level. This course has an extra grade point weighting of 0.5.

Please see above for a detailed description of Science: Conservation \& Resource Studies. ATlevel students will be required to go above and beyond the college preparatory Conservation \& Resource Studies course requirements. The AT learning expectations are more rigorous with a higher level of knowledge and skill expected and assessed throughout the investigative process, experiential fieldwork, field journaling, application, and reflection.

## AT Social Studies: Society, Governance, \& Civic Action

ID: $48539 \quad$ Credit: Social Studies<br>Grade: 11-12 Length: Year

Prerequisite: None
Note: The Advanced Topic (AT) designation indicates a course is at the university level, putting it at or above the additional Advanced Placement (AP) course level. This course has an extra grade point weighting of 0.5.

Please see above for a detailed description of Social Studies: Society, Governance, and Civic Action. Students who wish to earn Advanced Topic credit will individually be held to a higher standard of skill acquisition and will need to demonstrate a high level of skills performance.

## SUPPORT SERVICES



The SAS Learning Support department offers targeted services for students who need support or further instruction to help them succeed in their academic coursework. Any student, including those with a diagnosed learning need, may access support services when referred by a school professional or when recommended through a Student Support Meeting (SSM). The program's goal is for students to build strategies and skills that they can apply to their academic coursework and future lives.

New: Beginning in the 2024-25 school year, students who successfully complete Learning Lab, Learning Support II, ELA Lab II, and/or Geometry Lab with a grade of "P" (pass) will receive 0.5 elective credits per semester.

## LEARNING SUPPORT PROGRAM

## Learning Lab I

| ID: 47505 | Credit: Elective |
| :--- | :--- |
| Grade: 9 | Length: Year |

Prerequisite: By teacher and school professional referral.
The goal of the Learning Lab class is for 9th grade students to develop the skills necessary for success in their high school academic program and to work on individual learning goals. Students in this class will be flexibly grouped according to their individual needs in one or more of the following areas: reading, writing, math, and/or executive function. As students strengthen their strategies and skills in any of the above areas, they will have some class time to apply this learning to their academic coursework.

## Learning Support II

ID: 47502 Credit: Elective
Grade: 10-12 Length: Year
Prerequisite: By teacher and school professional referral.
In the Learning Support II program, 10th to 12th grade students work on individualized goals to acquire or refine the executive function and study skills necessary for success throughout high school and in preparation for college. Through small group instruction, students are assisted in applying these skills and strategies to their academic course work. The Learning Support II program aims to build confidence, self advocacy, and independence.

## English Language Arts Lab II

ID: 47511/2 Credit: Elective
Grade: 10-12 Length: Year
Prerequisite: By teacher and school professional referral.
This course provides targeted, individualized, small group support to students in grades 10, 11, and 12 to support their reading, writing, speaking, listening, and vocabulary skills in their humanities courses. Instruction and interventions for this

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course are driven by goals that are designed around specific areas of need for each student to build tools, strategies and skills to apply to content-area classes.

## Geometry Math Lab

ID: $47521 \quad$ Credit: Elective
Grade: 10-12 Length: Year
Prerequisite: By teacher and school professional referral.
This course provides targeted, individualized, small group support for students in Geometry to develop their mathematical knowledge and skill, mindset, and confidence. With a focus on each student's individual goals, instruction and interventions in this course focus on vocabulary development, conceptual understanding, study strategies and test-taking strategies for Geometry.

## STRUCTURED EAGLE BLOCK

## Structured Eagle Block

ID: 49998 Credit: Non-credit
Grade: 9-12 Length: Short-term, Semester, or Year
Prerequisite: By teacher and school professional referral or by a student's self-referral.

Structured Eagle Block offers support for students who may benefit from additional structure during their Eagle Block to help them organize and complete specific tasks or stay up-to-date with their work. In Structured Eagle Block students work with a coach to help them prioritize their work, plan their time, and provide accountability, as needed, to help them achieve their goals. Placement in Structured Eagle Block may be shortterm or long-term, depending on student need. Some students choose to enroll in Structured Eagle Block while others are referred by a teacher or counselor.

## ADVANCED STUDIES

SAS is committed to meeting the diverse needs of our students by providing a range of exceptional learning opportunities.

The Advanced Studies program consists of our school's college level course options. The program now includes over 40 college level offerings and is one of the many ways in which our school is working towards its vision of cultivating exceptional thinkers prepared for the future.

As we pursue this vision, we recognise the benefits to our students associated with both standardized and non-standardized approaches to student learning. It is for this reason that the Advanced Studies program is a hybrid of standardized and non-standardized curricula that includes both Advanced Placement (AP) courses and Advanced Topic (AT) courses.

## ADVANCED TOPICS AT SAS

Our AT courses are designed to foster the development of essential 21 st-century skills as well as to provide opportunities for students to showcase these skills in ways that are both authentic and unique. These courses are designed to help students to learn by doing, emphasizing production and real world application. Whenever possible, AT courses also connect students with relevant experiences and expertise in the field. Depth is prioritized over breadth, and students are expected and supported to have agency in directing their own learning.

Peak performance in AT courses is diverse, with students collaboratively publishing books, learning Chinese history in Chinese, co-constructing historical inquiries, planning and producing their own performing arts exhibitions, exploring various phenomena through computer modeling, and even consulting for local entrepreneurs.

It is impossible to capture all aspects of these courses in this guide so we encourage you to reach out to our teaching faculty and counselors for further guidance and support.

## ADVANCED PLACEMENT AT SAS

SAS has a long and successful history with the AP program, with students and faculty collaborating together to deliver exceptional results in over 20 courses each year. For many of our students, our AP program provides the perfect entry point to college level learning and plays a critical role in helping to develop college readiness.

SAS students may earn up to seven (7.0) year-long-equivalent AP credits during their high school careers. Though students may only earn seven AP credits, it is possible for students who plan appropriately to take more than seven AP exams. If you have any questions about the credit limit, please feel free to contact the college counseling department or high school administration.

Taking the AP exam in an AP Course is not mandatory. However, each year SAS has over 700 students taking a total of more than 2000 AP exams. Successfully delivering a program of this scale while still operating a full campus is a significant undertaking. As a result, SAS is only able to provide access to AP exams to students currently enrolled in the corresponding AP course, or in an aligned AT course. Similarly, faculty can only provide predicted AP scores to students currently enrolled in their classes. Students wishing to take an AP exam in a course in which they are not currently enrolled may contact their counselor who may be able to suggest a testing center here in Singapore.

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## EARNING COLLEGE CREDIT AT SAS

The AP program provides one potential avenue for earning college credit. We are also pleased to be able to offer this opportunity through our continued partnerships with Syracuse University. During the 2024-25 school year, SAS students taking AT Psychology are eligible for concurrent enrollment in Syracuse University courses.

Concurrent enrollment is not mandatory, and students will choose whether or not to participate at the beginning of the course. Please note that there is a fee per credit hour that participating students and families must pay. This fee is determined by Syracuse University Project Advance (http://supa.syr.edu). We will continue to explore partnerships with Syracuse University for some of our other AT courses in subsequent years.

## SUMMARY OF COURSE OFFERINGS

We are fortunate to be in a position to offer such a diverse range of college level learning opportunities and are grateful for the work of our exceptional faculty in continuing to strengthen our program. We encourage you to reach out to our high school counselors or our Head of Advanced Studies, Tim Trainor (ttrainor@sas.edu.sg), should you have any questions or need support. The following section offers a brief summary of all our Advanced Studies offerings. For full course descriptions, please refer to the entries for each course that appear earlier in this guide under each department. Those courses that provide access to AP Exams or concurrent enrollment credit opportunities are also outlined in Appendix III.

| DEPARTMENTS | ADVANCED STUDIES OFFERINGS | Length | Credit |
| :---: | :---: | :---: | :---: |
| ENGLISH | - AP English Language \& Composition | Year | English |
|  | - AT English: Literature | Year | English |
|  | - AT Non-Fiction and Rhetoric | Year | English |
|  | - AT English: Writing Workshop \& Publication | Year | English |
| SOCIAL STUDIES | - AP Comparative Government \& Politics | Semester II | Social Studies |
|  | - AP Economics | Year | Social Studies |
|  | - AP Economics (Self-Paced) | Year | Social Studies |
|  | - AP U.S. History | Year | US History |
|  | - AP U.S. Government \& Politics | Semester I | Social Studies |
|  | - AT Economics: Globalization | Semester | Social Studies |
|  | - AT Entreprenuership | Semester | Social Studies |
|  | - AT Geography \& Field Research | Year | Social Studies |
|  | - AT Historical Inquiry \& Research | Year | Social Studies |
|  | - AT Psychology | Year | Social Studies |
|  | - AT Urban Studies | Semester | Social Studies |
|  | - AT African American Studies | Year | Social Studies |
|  | - AT Seminar | Year | Elective |
|  | - AT Research \& Catalyst | Year | Elective |
| MATHEMATICS | - AP Calculus AB | Year | Math |
|  | - AP Calculus BC | Year | Math |
|  | - AP Calculus BC (Post-AB) | Semester 1 | Math |
|  | - AP Statistics | Year | Math |
|  | - AT Finite Math Modeling | Semester II | Math |
|  | - AT Linear Algebra | Semester | Math |
|  | - AT Multivariable Calculus | Semester | Math |
|  | - AT Post-Euclidean Geometry | Year | Math |
| SCIENCE | - AP Biology | Year | Science |
|  | - AP Chemistry | Year | Physical Science |
|  | - AP Physics 2 | Year | Physical Science |
|  | - AP Physics C | Year | Physical Science |
|  | - AT Environmental Science \& Field Research | Year | Life Science |
|  | - AT Science: Computational Modeling \& Simulation | Semester | Physical Science |


| DEPARTMENTS | ADVANCED STUDIES OFFERINGS | Length | Credit |
| :---: | :---: | :---: | :---: |
| WORLD LANGUAGES | - AP French Language \& Culture <br> - AP Spanish Language \& Culture <br> - AP Chinese Language \& Culture <br> - AT Spanish Language: Latin American History and Culture Through Arts Media <br> - AT Chinese Language: History | Year <br> Year <br> Year <br> Year <br> Year | Language <br> Language <br> Language <br> Language <br> Language |
| TECHNOLOGY, COMPUTER SCIENCE, AND ROBOTICS (TCR) | - AP Computer Science <br> - AT Computer Science: Data Structures | Year <br> Year | Elective <br> Elective |
| VISUAL AND PERFORMING ARTS | - AP Drawing | Year | Visual/ Performing Arts |
|  | - AP 2-D Art \& Design | Year | Visual/ Performing Arts |
|  | - AP 3-D Art \& Design | Year | Visual/ Performing Arts |
|  | - AT Performing Arts \& Catalyst | Year | Visual/ Performing Arts |
|  | - AT Visual Arts Collaborative Creation | Semester | Visual/ Performing Arts |
|  | - AT Visual Arts Catalyst | Semester | Visual/ Performing Arts |
| PHYSICAL EDUCATION | - AT Kinesiology | Semester | Physical Education |
| QUEST | - AT English: Research \& Composition | Year | English |
|  | - AT Math: Data Analysis \& Visualization | Year | Math |
|  | - AT Science: Conservation \& Resource Studies | Year | Science |
|  | - AT Social Studies: Society, Governance, \& Civic Action | Year | Social Studies |

## INTERIM SEMESTER



Interim Semester began at Singapore American School in the 1970s to address the growing perception that, though Singapore American School students resided in Singapore, they were increasingly separated from local life in Singapore and the region. Interim Semester is intended to expose students to new experiences, new ways of life, new challenges, and service. For one week during the second semester, all regularly scheduled high school courses cease while every SAS high school teacher and student takes part in a week-long Interim Semester course. Most courses entail travel to a foreign country, while some take place in Singapore. The courses are grouped into three categories: global studies, eco-adventure, and service learning. Interim Semester is a graded, credit-earning graduation requirement for each high school student each year. The fees are noted in the SAS Fee Sheet but are not included in the tuition. Costs will vary based on the experience selected as published in the Interim Handbook each year.

The program is committed to:

- deepening students' understanding of the world around them;
- inspiring students to contribute to the global community;
- encouraging students to challenge themselves; and
- building a sense of community.

Courses are offered in the following categories:

- Global Studies: These courses denote active participation and awareness of our interconnectedness with people and cultures around the world. Students will deepen their understanding of the world through themes. These themes may cross any academic discipline and often focus on development (resource management, environmental care, poverty), peace and conflict, cultural expression, and political conditions. Language study, which facilitates all cultural understanding, is also a valued focus area.
- Service Learning: These courses have the capacity to touch on each of the learning aspirations of the school's strategic focus. By using the model that knowledge leads to compassion, and compassion to action, service learning projects give students the opportunity to make a positive impact on the local community in which they work. Service learning provides a framework in which students learn and develop through active contribution in thoughtfully prepared service that meets the needs of the community.
- Eco-Adventure: These courses are designed around the belief that the outdoors provides the greatest context for humans to grow socially, emotionally, and academically. As such, eco-adventure courses provide students opportunities to learn and develop physically and intellectually while being fully immersed in the natural environment. Students will return from these excursions with an improved self-perception, increased academic skill-set, and a robust sense of the environmental dynamics of the region visited.


# FLEXIBLE LEARNING OPTIONS 

Independent Study

ID: 49013 (S1) / 49025 (S2)<br>Grade: 11-12<br>Credit: Elective<br>Length: Semester

Prerequisite: Students will be required to provide an approved independent learning proposal and management plan before the course selection process ends or complete the application process in order to assist a college level course. Please see your college counselor for more information.

The Independent Study option is designed so that students can study a topic, learn in an area in which no course is available, or assist a college level course. It is also for students to pursue partnership experiences that are supported by SAS. Rising juniors and seniors should select six other SAS classes, with the independent study course as a seventh course. Students will earn a Pass or Fail score based on the student's achievement in their learning targets. Successful completion would provide one-half credit per semester and be listed on the transcript as a $P$ (Pass). The course is not included in the SAS GPA. In order to ensure that students benefit from the full academic program offered at SAS, independent study activity cannot be used to fulfill SAS subject area graduation requirements.

## GOA Online Learning

ID: 48600 (S1) / 48601 (S2) Credit: Elective
Grade: 11-12
Length: Semester and Yearlong
Prerequisite: Students must meet and have their learning plan approved by the SAS GOA Site Director.

Global Online Academy (GOA) is a consortium of select independent schools from around the world. Through this program a limited number of SAS students work closely with globally distributed teachers and peers through online coursework. This personal and flexible online learning opportunity will challenge students to further develop cultural competence, global citizenship and communication skills. Students who would like to complete these individual learning options beyond SAS's course offerings may choose to enroll in a one-semester or yearlong online course through GOA. Students interested in GOA courses should select the "GOA Online Course" option during the SAS online course request process in the spring. Once a GOA course is approved, the student is committed to completing the course. Unlike
traditional SAS courses, GOA courses cannot be changed during the add/drop period at the beginning of a semester. In addition, students should note that collaboration with peers and teachers is an essential component of most GOA courses, and students will be expected to manage collaboration and communication across time zones. The SAS GOA Site Director will contact students to assist them through the process of GOA course registration.

Eligible students may complete a maximum of one credit per year through GOA, with the GOA course replacing one of the six or seven courses that a student would ordinarily take during the academic year. Students are encouraged to select a course that allows them to follow their interests and passions and goes beyond the options available at SAS. Credits earned through GOA are used to fulfill the minimum number of SAS elective credits required for graduation, but do not fulfill department specific minimum requirements (except in the case of the World Language options). While students are encouraged to enhance their learning through other learning opportunities and report details on university applications, only GOA courses will be listed on the SAS transcript.

## GOA COURSE OPTIONS

Only those GOA courses listed below are available for SAS students. For more complete information on the length of each course, full course descriptions, and which semester the course is offered, please consult the GOA online course catalog at https://globalonlineacademy. org/student-program/student-courses

## ART, MEDIA, \& DESIGN

Architecture - In this course students will explore the architecture, engineering, and construction of some of the most important buildings from human history. Students will be encouraged to build models of elements of these structures to better understand the construction and engineering behind their design.

Arts Entrepreneurship - In this course, aspiring visual artists, designers, filmmakers, musicians, and other creatives will learn how to find success in the dynamic fields of their choosing. Students will learn about arts careers and organizations by attending virtual events and interviewing art practitioners, entrepreneurs, and administrators.

Data Visualization - This course trains students to collect, organize, interpret, and communicate massive amounts of information.

## MATHEMATICS \& TECHNOLOGY

Computer Science II: Analyzing Data with Python - Composed of a series of "game jams," the course asks students to solve problems and create content, developing the design and technical skills necessary to build their own games.

Cyber Security - This course explores the fundamentals of and vulnerabilities in the design of computers, networks, and the internet.

Game Theory -Do you play games? Ever wonder if you're using "the right" strategy? What makes one strategy better than another? In this course, we'll explore a branch of mathematics known as game theory, which answers these questions and many more.

Problem Solving with Engineering and Design - This course investigates various topics in science, technology, computer programming, engineering, and mathematics using a series of
projects and problems that are both meaningful and relevant to the students' lives.

## Introduction to Artificial Intelligence -

 Explore the history of research into artificial general intelligence and the subsequent focus on the subfields of narrow AI: Neural networks, Machine Learning and Expert Systems, Deep Learning, Natural Language Processing, and Machine Vision and Facial Recognition. Students will learn how Al training datasets cause bias and focus on the ethics and principles of responsible Al: fairness, transparency and explainability, human-centeredness, and privacy and security.
## Introduction to Blockchain and

 Cryptocurrency - An entry level course for anyone excited by the space. This course explores how we arrived at the place we are now, and what the current and possible applications of crypto are. We'll explore how markets in crypto operate, where they've received practical application, and where the space may head in the future through the lenses of creators, consumers, and governments. In addition, we will take a deeper look at blockchain, the underlying technology that powers cryptocurrencies, and it's many, far-reaching implications for the future of government, business, the arts and more.Number Theory - This Online Number Theory Course allows you to explore pure mathematical reasoning, along with the algorithms \& encrypted transmissions that surround us.

## SCIENCE \& HEALTH

Abnormal Psychology - This Online Abnormal Psychology Course focuses on a variety of atypical psychiatric disorders, helping students understand symptoms, diagnosis \& treatments.

Bioethics - Ethics is the study of what one should do as an individual and as a member of society. In this course students will evaluate ethical issues related to medicine and the life sciences.

Developmental Psychology - This course is an introduction to the fascinating study of human growth and development focusing on the significant changes that occur physically, emotionally, cognitively and socially from birth through adolescence. Students consider the big questions of heredity versus environment, stability versus change, and continuity versus discrete stages of change as they investigate language
acquisition, sensorimotor development, thinking and learning, and personality and emotions.

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

Medical Problem Solving I - In this class, students enhance critical thinking skills by collaboratively solving medical mystery cases, similar to the approach used in many medical schools.

Medical Problem Solving II - This course is an extension of the problem-based learning done in Medical Problem Solving I. While collaborative examination of medical case studies will remain the core work of the course, students will tackle more complex cases and explore new topics in medical science.

Neuropsychology - This course is an exploration of the neurological basis of behavior. It will cover basic brain anatomy and function as well as cognitive and behavioral disorders from a neurobiological perspective.

Positive Psychology - What is a meaningful, happy, and fulfilling life? In this course, we'll dive into what positive psychology research tells us about the formula for a meaningful life, the ingredients of fulfilling relationships, and changes that occur in the brain when inspired by music, visual art, physical activity, and more.

Social Psychology - Social psychology examines how the thoughts, feelings, and behaviors of a person are influenced by the actual, imagined, or implied presence of others.

## SOCIAL SCIENCES

Business Problem Solving - Students in this course tackle real-world problems facing businesses large and small in today's fast-changing global marketplace where radical reinvention is on the minds of many business leaders. Students work collaboratively and independently on case
studies, exploring business issues through varied lenses including operations, marketing, human capital, finance and risk management as well as sustainability.

Capitalism: Past, Present, and Future - In this course, students examine advocates from both circles, looking closely at the components of capitalism - and other systems of economic and social control - to decide what they think. As students build their own philosophies around capitalism, they work collaboratively and independently on case studies, exploring examples of capitalism around the world and in the world around us.

## Entrepreneurship in a Global Context - In

 this experiential course students develop an understanding of entrepreneurship in today's global market; employ innovation, design, and creative solutions for building a viable business model; and learn to develop, refine, and pitch a new start-up.Gender \& Society - This course uses the concept of gender to examine a range of topics and disciplines that might include: feminism, gay and lesbian studies, women's studies, popular culture, and politics.

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

Discourse Across Differences - This course equips students with strategies for engaging such issues through constructive dialogue focused on building understanding across differences. Through structured conversations, debate, rhetorical analysis, and guided reflection, students will gain skills for having difficult yet thoughtful dialogues. They will learn how to carefully evaluate multiple perspectives, make evidence-based claims, ask insightful questions, take others' viewpoints into account, and seek common ground. Specific topics examined may include technology's impact on privacy, environmental sustainability, social justice reform, and other current events that are sure to emerge! By practicing perspective-taking, identifying shared goals, and finding compromise, students
will be able to have productive conversations even when they disagree.

International Relations - In this course, you will go beyond the soundbites and menacing headlines to explore the context, causes, and consequences of the most pressing global issues of our time.

## Introduction to Branding and Marketing

 - Students learn what it takes to build an effective brand that can authentically connect with consumers and create long-term brand equity. The course starts with introducing what a brand is and goes on to explore how different branding elements, such as Visual Identity, Advertising Strategy, Content Marketing, as well as the intangible elements of the Customer Journey, come together to create a unique Brand Experience. By applying marketing theories, interviewing experts, and analyzing modern case studies, students will develop and strengthen their competencies as brand strategists.Prisons \& the Criminal Law - In this 14-week course, students become familiar with the legal rules and institutions that determine who goes to prison, and for how long.

Race \& Society - What is race? Is it something we're born with? Is it an idea that society imposes on us? An identity we perform? These are just a few of the questions that students in this course will explore together as they approach the concept of race as a social construct.

Religion and Society - Students in this course conduct several deep dives into specific case studies in order to understand how religious identity intersects with various systems of power, including race, gender, class, sexual orientation, and ethnicity. By engaging with material from a variety of academic fields (history, sociology, anthropology, and psychology), students grapple with the complex ways in which society and religious identity relate to one another.

## WORLD LANGUAGES

Arabic Language Through Culture I, II, III - Through study of Levantine (Jordanian) Arabic and the Arabic writing system, students develop Novice proficiency in interpersonal communication. Students will communicate in spontaneous spoken conversations on familiar topics, including food, weather, and hobbies, using a variety of practiced or memorized words, phrases, simple sentences, and questions. Students in Arabic III have demonstrated Intermediate interpersonal proficiency in Arabic (MSA or a dialect) through two years in Arabic Language Through Culture or other coursework.

Japanese Language Through Culture I, II, III - This full-year course is a unique combination of Japanese culture and language, weaving cultural comparison with the study of basic Japanese language and grammar. Through language learning, students in this course share their voices, cultivate global perspectives, and foster appreciation of self and others. Students in Japanese III have mastered most of the conjugation patterns (TE/TA form, dictionary form, and NAI form) that are necessary to speak and write in complex structures.

## COLLEGE PREPARATION

At SAS, a team of college counselors works with juniors and seniors every year to assist them in the process of selecting and applying to colleges and universities. The focus is on helping students find colleges that will be a good fit for them: colleges to which they are admissible, at which they will be successful and happy, and from which they will graduate.

Every SAS student is assigned a college counselor in the spring of sophomore year. At that point, the college counselor will work with the student on questions regarding curriculum planning and course registration. In the middle of junior year, the college counselors begin the college counseling process in earnest, meeting with students and families to talk about ideas and aspirations and to begin building a college list. The college counseling office also offers a wide range of programming for parents interested in learning more about college admissions.

The SAS college counselors are here to work with each individual student and family to talk about and plan for the journey ahead.

## WHAT COLLEGES AND UNIVERSITIES CONSIDER

The best way for students to prepare for the college admissions process is to have robust academic and extracurricular lives, and develop the social emotional competencies of self-awareness, selfmanagement, social awareness, relationship skills, and responsible decision-making. All students will benefit from investing themselves fully in a wide range of courses, from becoming engaged in meaningful extracurricular activities, and from ensuring their own social-emotional well-being; but the considerations of each college and university will be unique.

When admissions officers in the US review applications, they take a broad range of factors into consideration. At most schools, the first and most important factors are course choices, rigor, and grades. US schools will also review letters of recommendation, student essays, involvement in activities, and the college's own institutional priorities. Some schools may also consider SAT or ACT scores, though many US colleges now have test blind or test optional admissions policies.

Each year, between 15 and 20 percent of SAS seniors choose to apply to colleges in locations such as Australia, Canada, Singapore, and the UK. Each of these countries has its own unique application review system. The SAS High School College Counseling website has information about these countries and the factors they use in their admissions reviews.

At most universities outside of North America, students are required to be certain of their course of study at the time of application. This means that students must be prepared to launch into a specific course of university study-and to stay with it for three years or until the degree is completed. Therefore, students interested in studying at universities beyond North America generally benefit from deciding on their intended course of college study early. In consultation with their college counselor, they should plan their course schedule with careful attention to the field that they think they might like to pursue in the future. Most universities in the UK require that students sit for three AP exams (or five, in a handful of cases) related to their intended area of study, so students who are UK-bound should plan accordingly.

## COURSE SELECTION AND COLLEGE

US colleges expect each student to pursue a curriculum that is appropriately rigorous for that individual student-in other words, one in which the student can be challenged and can also be academically successful. This means that, when choosing high school courses, it is important to take a strong academic program—but it is even more important for students to take classes that they enjoy and in which they can earn strong grades.

The minimum SAS graduation requirements are just that: minimums. All students should look at the "Recommended for College" column in the Graduation Requirements rather than the "Minimum Credits" column when deciding how many credits of study to pursue in a given subject area. Students should speak to teachers and their PAC counselor (if they are in grade 9) or to their college counselor (if they are in grade 10 or 11) for advice on exactly which courses to take.

Each student's graduation plan is different at SAS; there is no one single pathway to graduation. Some students will take more rigorous course loads than others, and colleges understand this. Students should know that our Advanced Studies (AP and AT) courses are more challenging, asking students to undertake rigorous and sophisticated assignments and to work independently. When choosing courses, students who enroll in Advanced Studies classes must plan on dedicating significantly more time to those courses each day. Students should take this into consideration and be realistic about what they can and will do.

While both AP and AT courses receive additional GPA weighting at SAS, no US colleges require that students take advanced courses. US colleges simply want each student to take a course load that is appropriately rigorous. As noted above, most universities in the UK require that students sit for and score well on three (and, in a few rare instances, five) AP exams in their area of interest, so students who are UK-bound should plan to take at least three classes that offer AP exams. UK-bound students should also look to round out their studies with other course choices that will allow them to demonstrate their dedication to a particular field. Universities in Singapore, South Korea, and a few universities in Australia may also expect to see some AP scores, so AP classes may be important for students headed to these countries.

It is important to note that, while US colleges are looking for academically capable students who have challenged themselves, they also want students who have contributed to their school or community. US colleges are looking for interesting people who will become active members of their campuses; they will seek out students who are significantly involved with a few meaningful extracurricular activities. Students should, therefore, plan to balance their academic load with other interests and activities.

## COLLEGE APPLICATION POLICIES

While SAS has various college application policies, we would like to highlight two of our policies here:

## 1. PREDICTED AP EXAM SCORES

SAS teachers will provide predicted AP scores for students currently enrolled in corresponding AP classes or in an AP-aligned class where necessary for college applications. Teachers do not share predicted AP scores with students or parents.

## 2. REPORTING TO COLLEGES - LOSS OF CREDIT

If a senior loses credit for a course for absence reasons, the college counselors will report that loss of credit to any school whose application form asks for notification of changes to information requested in the application.

## APPENDIX I: YEARLY PLANNER

|  | Grade 9 Course Choice | Status |  | Gr 9 Credits | Grade 10 Course Choice | Status |  | Gr 10 <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | S1 | S2 |  |  | S1 | S2 |  |
| English | Humanities 9 <br> *Required core | $\checkmark$ | $\checkmark$ |  | English 10 | $\checkmark$ | $\checkmark$ |  |
|  |  |  |  |  | American Studies | $\checkmark$ |  |  |
| Social Studies |  | $\checkmark$ | $\checkmark$ |  | (E | - | $\checkmark$ |  |
|  |  |  |  |  | US Hist \& Gov't | $\checkmark$ | $\checkmark$ |  |
|  |  |  |  |  |  | - | - |  |
| Math | Integrated Math I | $\checkmark$ | $\checkmark$ |  | Geometry | $\checkmark$ | $\checkmark$ |  |
|  | or Geometry | - | $\checkmark$ |  | or Alg II / Trig | $\checkmark$ | - |  |
|  | or Int Math II w/Trig | - | - |  | or Accel Math II | - | - |  |
|  |  | $\checkmark$ | $\checkmark$ |  | or Alg II | $\checkmark$ | - |  |
|  |  | $\checkmark$ | $\checkmark$ |  |  | - | * |  |
| Science | Biology | - | $\checkmark$ |  | Chemistry | $\checkmark$ | $\checkmark$ |  |
|  | or Accel Bio | $\checkmark$ | $\checkmark$ |  |  | $\checkmark$ | $\checkmark$ |  |
|  |  | $\checkmark$ | $\checkmark$ |  |  | $\checkmark$ | - |  |
|  |  | $\checkmark$ | $\checkmark$ |  |  | $\checkmark$ | $\checkmark$ |  |
| World Language | Chinese | $\checkmark$ | $\checkmark$ |  | Chinese | $\checkmark$ | V |  |
|  | or French | $\nabla$ | $\checkmark$ |  | or French | $\checkmark$ | $\checkmark$ |  |
|  | or Spanish | $\checkmark$ | - |  | or Spanish | $\checkmark$ | - |  |
| Visual \& Performing Arts | Choose at least 1 (optional) | $\checkmark$ | $\checkmark$ |  | Choose at least 1 (optional) | $\checkmark$ | $\checkmark$ |  |
|  |  | $\checkmark$ | $\checkmark$ |  |  | $\checkmark$ | $\checkmark$ |  |
|  |  | $\checkmark$ | $\checkmark$ |  |  | $\checkmark$ | - |  |
|  |  | $\checkmark$ | $\checkmark$ |  |  | $\checkmark$ | $\checkmark$ |  |
| Physical Education | Choose up to 2 (optional) | $\checkmark$ | $\checkmark$ |  | Choose up to 2 (optional) | $\checkmark$ | $\checkmark$ |  |
|  |  | $\checkmark$ | $\checkmark$ |  |  | * | - |  |
|  |  | - | $\checkmark$ |  |  | $\checkmark$ | - |  |
|  |  | $\checkmark$ | $\checkmark$ |  |  | $\checkmark$ | $\checkmark$ |  |
| Health |  |  |  |  | Life Skills \& Human Devel *Required core | $\checkmark$ | $\checkmark$ |  |
| Tech/ Electives | Choose up to 2 (optional) | $\checkmark$ | $\checkmark$ |  | Choose up to 2 (optional) | $\checkmark$ | $\checkmark$ |  |
|  |  |  | $\checkmark$ |  |  | $\checkmark$ | $\checkmark$ |  |
| Catalyst |  |  |  |  |  |  |  |  |
| Interim |  | $\checkmark$ | $\checkmark$ |  |  | $\checkmark$ | $\checkmark$ |  |
| $\begin{aligned} & \text { CREDIT } \\ & \text { TOTALS } \end{aligned}$ | You need to register for 7 credits in grade 9 . Each semester of a class earns 0.5 credits. Interim semester earns 0.25 credits each year. |  |  | 0.00 | You need to register for 7 credits in grade 10 . Each semester of a class earns 0.5 credits. Interim semester earns 0.25 credits each year. |  |  | 0.00 |

## NOTES:

Grade 9 students must take 7 credits ( 0.5 credits may be earned each class, each semester) Grade 10 students must take 7 credits ( 0.5 credits may be earned each class, each semester) Grade 11 students must take $6.5-7$ credits ( 0.5 credits may be earned each class, each semester) Grade 12 students must take $6-7$ credits ( 0.5 credits may be earned each class, each semester)

## AP credits capped at 7

Current AP Count: 0

- Students may take no more than 7 classes per semester (May vary if a student receives Learning Support services)
- US History required of US citizens
- College and universities may have specific high school course entrance requirements. (i.e. University of California schools require one credit of US History course.)
- Courses listed in the PPG are subject to change in future years.

| Grade 11 Course Choice | Status |  | Gr 11 Credits | Grade 12 Course Choice | Status |  | Gr 12 <br> Credits | Total Credits | Req'd to Graduate | Grad Reqmts Met? | Recom'd for US College | Recom'd Met? |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | S1 | S2 |  |  | S1 | S2 |  |  |  |  |  |  |
| 2 semesters of English | $\checkmark$ | $\checkmark$ |  | 2 semesters of English | $\checkmark$ | $\checkmark$ |  | 0.0 | 4.0 | NO | 4.0 | NO |
|  | $\checkmark$ | $\checkmark$ |  |  | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |
| Wide Variety of | $\checkmark$ | $\checkmark$ |  | Wide Variety of | $\checkmark$ | $\checkmark$ |  | 0.0 | 2.0 | NO | 4.0 | NO |
| Soc St options | * | $\checkmark$ |  | Soc St options | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |
|  | $\checkmark$ | $\checkmark$ |  |  | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |
| Wide Variety of | $\checkmark$ | $\checkmark$ |  | Wide Variety of | $\checkmark$ | $\checkmark$ |  | 0.0 | 2.0 | NO | 4.0 | NO |
| Math options | $\checkmark$ | $\checkmark$ |  | Math options | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |
|  | $\checkmark$ | $\checkmark$ |  |  | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |
|  | $\checkmark$ | $\checkmark$ |  |  | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |
|  | $\checkmark$ | $\checkmark$ |  |  | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |
| Wide Variety of | $\checkmark$ | $\checkmark$ |  | Wide Variety of | $\checkmark$ | $\checkmark$ |  | 0.0 | 2.0 | NO | 4.0 | NO |
| Science options | $\checkmark$ | $\checkmark$ |  | Science options | - | $\checkmark$ |  |  |  |  |  |  |
|  | - | $\checkmark$ |  |  | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |
|  | $\checkmark$ | $\checkmark$ |  |  | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |
| Chinese | $\checkmark$ | $\checkmark$ |  | Chinese | $\checkmark$ | $\checkmark$ |  | 0.0 | 2.0 | NO | 4.0 | NO |
| or French | $\checkmark$ | $\checkmark$ |  | or French | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |
| or Spanish | $\checkmark$ | $\checkmark$ |  | or Spanish | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |
| Wide Variety of | $\checkmark$ | $\checkmark$ |  | Wide Variety of | $\checkmark$ | $\checkmark$ |  | 0.0 | 1.0 | NO | 1.0 | NO |
| VPA options | $\checkmark$ | $\checkmark$ |  | VPA options | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |
|  | * | $\checkmark$ |  |  | $\checkmark$ | * |  |  |  |  |  |  |
|  | $\checkmark$ | $\checkmark$ |  |  | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |
| Wide Variety of PE options | $\checkmark$ | $\checkmark$ |  | Wide Variety of | $\checkmark$ | $\checkmark$ |  | 0.0 | 1.5 | NO |  |  |
|  | $\checkmark$ | $\checkmark$ |  | PE options | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |
|  | * | - |  |  | $\checkmark$ | - |  |  |  |  |  |  |
|  | $\checkmark$ | $\checkmark$ |  |  | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |
|  | $\checkmark$ | $\checkmark$ |  |  | $\checkmark$ | $\checkmark$ |  | 0.0 | 0.5 | NO |  |  |
| Wide Variety of Elective options | $\checkmark$ | $\checkmark$ |  | Wide Variety of | $\checkmark$ | $\checkmark$ |  | 0.0 | N/A | N/A |  |  |
|  | $\checkmark$ | $\checkmark$ |  | Elective options | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |
|  | $\checkmark$ | $\checkmark$ |  |  | $\checkmark$ | $\checkmark$ |  | 0.0 | 0.5 | NO |  |  |
|  | $\checkmark$ | $\checkmark$ |  |  | $\checkmark$ | $\checkmark$ |  | 0.0 | 0.25 | NO |  |  |
| You need to register for 6-7 credits in grade 11. Each semester of a class earns 0.5 credits. Interim semester earns 0.25 credits each year. |  |  | 0.00 | You need to register for 6-7 credits in grade 12. <br> Each semester of a class earns 0.5 credits. Interim semester earns 0.25 credits each year. |  |  | 0.00 | 0.00 | 24.0 | NO |  |  |

## How are you completeing your Catalyst Requirement?

SAS Catalyst Project
AT Reserach \& Catalyst
AT Peforming Arts \& Catalyst
Quest

## Instructions:

Type the name of the course you intend to take in the appropriate cell.
Enter Enr in the semester thatyou are enrolled for. (If you don't know the semester, it can go in either.)
At the end of the semester you can enter the grades achieved for each class.
The credits column will calculate your credits for any column with a passing grade.

## APPENDIX II: COURSE LST

| English |
| :---: |
| Humanities 9............................... 2xYR |
| American Studies........................ 2xYR |
| English 10.....................................YR |
| Asian Lit: East-West Persp............... SM |
| Creative Writing............................. SM |
| Literature \& Imagination................. SM |
| British Lit: The World of ................... SM Shakespeare |
| Contemporary American Lit ............SM |
| Studies in Satire............................. SM |
| World Lit: Myths/Monsters .............. SM |
| Read, Write, \& Publish.....................YR |
| AP Eng Lang \& Compo .................... YR |
| AT Eng: Literature...........................YR |
| AT Eng: NonFic \& Rhetoric...............YR |
|  |
|  |

## Social Studies

Humanities 9.......... $2 \times$ YR AS Ludies (Eng 10/US Hist) ........ 2xYR US History \& Govt ... .YR Modern Hist of S'pore .............................SM Modern Philosophy ..........................SM Law \& Justice. ..SM Economics ........................................SM Behavioral Econ \& Game...................SM Business



## Tech, Comp Sci, \& Robotics

Computer Science \& Design: Artificial Intelligence I....................... SM Comp Sci:Mob App Dev ..................SM
Comp Sci I ..........................................SM Designing Virtual Worlds..................SM

Engineering/Robotics
Intro to Robotics...............................SM
Robotics Science ....................................SM/YR

Engineering Design..........................SM
AP Comp Science .
AT Comp Science: Data
Structures.............................YR
Structures

## Visual/Performing Arts

Visual Arts:
Art I: Foundations............................. SM
Ceramics I........................................SM
Ceramics II...........................................SM
Ceramics III........................................YR

Studio Art ...........................................YR
Mixed Media/Dig Processes............. SM
Graphic Design. YR

Filmmaking ....................................SM
Adv Filmmaking................................SM
Digital Photography ..........................SM
Adv Digital Photography ....................................
Media Arts
Media Arts: Broadcast Film ................YR
AP Drawing
YR

AP 3-D Art \& Design......................................YR
AT Visual Arts Collab Creation .........S
AT Visual Arts Catalyst.
.SM
Performing Arts:
Theater: Stagecraft..................
Theater: Production.
SM
Theater: Adv Production
... S2
ITheater: Improvisation.
. SM
Theater: Adv Improvisation
SM
SM
Musical Theater:Hist/Prod
Theater: Sketch Comedy..
Dance I .. - Intro to Dance...............SM

Dance II ........................................ SM
Dance III ...........................................SM

Dance Performance ...........................YR
Strings
Concert Strings..................................YR
String Ensemble .............................................YR

## Band:

Concert Band ....................................YR
Jazz Improvisation .............................SM
Symphonic Band........................................... YR
Wind Ensemble .............................................. YR
Vocal Music:
Concert Choir ............................. SM/Y
Choral Ensemble ..............................................................................
SAS Singers
Additional Music Courses: SM
Introduction to Guitar..........................................................
Advanced Guitar ........
AT Perf. Arts \& Catalyst .................... YR

## Physical \& Health Education

Physical Education:
Dance I .. - Intro to Dance...........SM
Dance II ....................................SM
Dance III SM
Dance Performance ............................YR
Fitness:
Fit for the Body/Mind ......................SM
Group Fitness SM Group Fitness II ...............................SM

Weight Training \& Cond II......................SM
Individual Activities
Athletics. SM
Climbing/Adventure Trg.................... SM
Lifeguarding ............................................SM
Personal Def \& Combatives...................SM
Sports \& Games:
Fld Hockey/Softball/Golf...................SM
Indoor Team Sports .......................... SM
International Sports ..........................SM
Racquet Sports .................................SM
Soccer/FlagFtbl/Rugby.....................SM
Health Education:
Life Skills/Human Dev.......................SM
AT Kinesiology..................................SM

## Catalyst

The SAS Catalyst Project ................... SM
AT Performing Arts \& Catalyst.............. YR AT Visual Arts Catalyst.......................SM

AP Capstone/Catalyst:
AT Research \& Catalyst.......................YR
AT Seminar

## Quest

Eng:Research/Comp..........................YR
Math: Data Analysis/Vis......................YR
SS:Soc,Gov/Civic Action
YR
lexible Learning Option
Independent Study............................ SM
Global Online Learning .............. SM/YR

## Advanced Studies

English
AP Eng Lang \& Compo $\quad$ YR
AT Eng Literature................................YR
AT Eng: NonFic \& Rhetoric.........................................
AT Eng: Writing Workshop/
Social Studies
AP Comp Gov \& Politics.................... S2
AP Economics .....................................YR
AP US History .....................................YR
AP US Gov/Politics ............................ S
AT African Am Studies.......................YR
AT Econ: Globalization .......................SM
AT Entrepreneurship.........................SM
AT Geo \& Field Research ......................................................
AT Hist Inquiry/Research ..........................YR
AT Psychology ...................................YR
AT Urban Studies.......................................... SM
Mathematics:
AP Calculus AB..................................YR
AP Caculus BC YR

AP Calculus BC (Post-AB) ................... S1
AP Statistics ............................................ YR
AT Finite Math Modeling................... S2
AT Linear Algebra............................. SM
AP Biology

AP Physics 2 . YR
$Y R$

AP Physics 2 ...YR
YR
AP Physics C.....................................YR
AT Env Sci \& Field Research ...............YR
AT Sci: Computational
Modelling \& Simulation
World Language:
AP French Lang/C
AP Spanish Lang/Culture .... ...YR
AP Spanish Lang \& Culture ................YR
AT Spanish Lang \& Culture.......... Hist \&
Culture ..................................... YR
AT Chinese Lang: History ................................................
Technology, Computer Science, and
Robotics (TCR):
AP Comp Sci
AT Comp Sci: Data Structures ...................................

Visual \& Performing Arts:
AP Drawing....................
AP 2-D Art \& Design.........................................................
AP 3-D Art \& Design.......................... YR
AT Performing Arts \& Catalyst...........Y AT Visual Arts Collab Creation .......... SM
AT Visual Arts Catalyst........................SM
Physical Education:
AT Kinesiology.
Catalyst:
AT Perf. Arts \& Catalyst
AT Research \& Catalyst....................... YR
AT Visual Arts
AT Visual Arts Catalyst
SM Sci: Conserv.\& Resource ...................YR AT M: Research/Comp ..................YR
AT Sci: Conserv.\& Resource...................YR
AT SS: Soc, Gov/Civ Action..................YR

## Support Services

Learning Support Program
.............................YR
Learning Support II............................YR
English Lang Arts Lab II .. YR
YR

Sructured Eagle Block Program::
Structured Eagle Block..........ST/SM/YR
(Recommendation is required for these courses.)

# APPENDIX III: AP EXAM \& CONCURRENT ENROLLMENT CREDIT OPTIONS 

Objective:
The following information will help students and families to better understand their access to AP Exam and/or Syracuse University credit based on course enrollment.

The Singapore American School Advanced Studies program is pleased to offer students the opportunity to take a wide variety of AP exams and to earn Syracuse University credit through concurrent enrollment. In order to access these opportunities, students must be enrolled in the associated Advanced Placement (AP) or Advanced Topic (AT) courses here at SAS. (Please note that independent study may not be used to obtain access.) The following table lists the AP exams and university credits available at SAS alongside the courses that provide access to these opportunities.

| SUBJECTS | AP EXAM OR UNIVERSITY CREDIT | ASSOCIATED ADVANCED STUDIES COURSE |
| :---: | :---: | :---: |
| ENGLISH | AP English Language Exam | AP English Language |
|  | AP English Literature Exam (requires selfstudy) | AT English: Literature |
| MATHEMATICS | AP Calculus AB Exam | AP Calculus AB |
|  | AP Calculus BC Exam | AP Calculus BC (Year-Long or Post-AB) |
|  | AP Statistics Exam | AP Statistics |
| SCIENCE | AP Biology Exam | AP Biology |
|  | AP Chemistry Exam | AP Chemistry |
|  | AP Environmental Science Exam | AT Environmental Science \& Field Research |
|  | AP Physics 1 Exam (requires self-study) | Accelerated Physics |
|  | AP Physics 2 Exam | AP Physics 2 |
|  | AP Physics C: Mechanics Exam | AP Physics C |
|  | AP Physics C: Electricity \& Magnetism Exam | AP Physics C |
| SOCIAL STUDIES | AP African American Studies | AT African American Studies |
|  | AP Gov \& Politics: US Exam | AP Gov \& Politics: US |
|  | AP Gov \& Politics: Comparative Exam | AP Gov \& Politics: Comparative |
|  | AP Macroeconomics Exam | AP Economics |
|  | AP Microeconomics Exam | AP Economics |
|  | AP Seminar Exam | AT Seminar |
|  | AP Research Exam (also offered in Quest) | AT Research \& Catalyst |
|  | AP US History Exam | AP US History |
|  | Syracuse University Credit (PSY 205) | AT Psychology |


| SUBJECTS | AP EXAM OR SYRACUSE UNIVERSITY CREDIT | ASSOCIATED ADVANCED STUDIES COURSE |
| :---: | :---: | :---: |
| TECHNOLOGY, COMPUTER SCIENCE, AND ROBOTICS [TCR] | AP Computer Science Exam | AP Computer Science |
| VISUAL \& PERFORMING ARTS | AP Drawing Exam | AP Drawing |
|  | AP 2-D Art and Design Exam | AP 2-D Art and Design |
|  | AP 3-D Art and Design Exam | AP 3-D Art and Design |
| WORLD LANGUAGES | AP Chinese Language \& Culture Exam | AP Chinese Language \& Culture OR AT Chinese History |
|  | AP French Language Exam | AP French Language |
|  | AP Spanish Language Exam | AP Spanish Language |
| QUEST | AP Research Exam (also offered in TCR) | AT Research |

## ADVANCED PLACEMENT (AP) EXAM GUIDELINES:

Singapore American School only administers AP exams to SAS students who are currently enrolled in the respective AP course or in an associated AT course that explicitly provides access to an AP exam. If SAS does not currently offer a particular AP course, students cannot take the course as independent study and SAS will not administer the respective AP exam(s). Please refer to specific Advanced Studies course descriptions to see if a course explicitly provides access to an AP exam.

Students who transfer to SAS at the start of the second semester can request to take an AP exam for a course they are not enrolled in at SAS, if they have been enrolled in the course at another high school before transferring to SAS mid-year. The request must be endorsed by a student's college counselor, an SAS teacher who is a subject expert in the respective exam, and the Advanced Studies Coordinator.

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