



HIGH SCHOOL PROGRAM GUIDE





USING YOUR PROGRAM PLANNING GUIDE

Singapore American School is committed to assisting students in developing a program of study that meets their academic and college goals, offers instruction that will lead to a healthy life-style, and affords ample opportunity for participation in meaningful activities. This guide provides information about the courses typically 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 choose courses each April for both semesters of the following school year. Students new to SAS will meet with a counselor to select courses prior to enrollment. All students are responsible for taking the time to fully understand what a course will cover, the 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. Not all courses are available to all grades.

All members of the SAS faculty are available to assist students and parents as courses are selected for the next academic year. Feel free to contact us.

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NOTEWORTHY IN 2016-2017

The 2016-2017 school year will bring several changes to Singapore American School. We are thrilled to offer new courses, new programs, and additional learning options to students. While details regarding many of these changes are included in other sections of this guide, the following are some of the highlights.

ADVANCED TOPIC COURSES

We are pleased to announce that the high school will offer its first Advanced Topic (AT) courses during the 2016-17 school year. These courses are listed under "New Courses for 2016-17" and are described in detail in this guide. The high school will be developing at least ten Advanced Topic (AT) courses by 2019-20 to provide more relevant learning options and to ensure greater focus on 21st Century competencies and to better prepare students for their future aspirations. Teams of educators are using development guidelines that focus on relevancy, skill development, deep exploration, project based learning, and real world applications as they research, develop, and implement novel SAS AT courses. Each new AT course has been created with the assistance of external university and professional experts and was vetted for quality by college admissions representatives.

MAXIMUM NUMBER OF APS

In order to provide greater opportunities for students to take more relevant course options, including the new Advanced Topic courses, SAS will cap the total number AP courses a student can take during their SAS career. Beginning with the graduating class of 2021, all students will be limited to seven yearlong equivalent AP courses during their SAS career. The AP cap was delayed until 2021 to ensure the full menu of AT courses is in place for students.

QUEST PROGRAM LAUNCHING

We are thrilled to announce that the Quest Program has enrolled its first cohort of students! Beginning in 2016-17, the innovative year-long program will provide seniors with opportunities to:

- embrace unique experiences and challenges not available in existing course offerings;
- accelerate learning through interdisciplinary and real world applications;
- deep dive into a particular area of interest or passion;
- learn essential skills to prepare them for their future; and
- distinguish themselves when applying to college.

Unique features of the Quest program include:

- flexible scheduling (courses are structured around intensive, extended immersions and are not constrained by the rotating block schedule);
- off-campus experiences throughout the year;
- participation in corporate partnerships and community outreach;
- thematic courses;
- extended engagement with the senior catalyst project.

RECOGNITION OPPORTUNITIES AT GRADUATION

As a school committed to standards-based grading, we believe that learning is not a competition and that every student can reach high levels of learning. Our systems for recognizing students' hard work and achievement must reflect that belief.

This year, the high school's current valedictorian/salutatorian recognition model was carefully considered by our department chairs and our faculty. The department chairs were unanimous in recommending to the Cabinet a transition to a cum laude system based on Harvard University's recognition model. The Cabinet has approved this transition, and our cum laude system will take effect beginning with the graduating class of 2018.

Within the new system, students will be recognized in three categories based on their grade point averages. Recognition will no longer be based on

SINGAPORE AMERICAN SCHOOL

class rank, and theoretically, it is possible for all students to earn cum laude graduation status.

Cum laude graduation status will be awarded using the following criteria:

- Summa Cum Laude - 4.3 GPA or higher
Highest Distinction
- Magna Cum Laude - minimum 4.2 GPA
High Distinction
- Cum Laude - minimum 4.1 GPA
Distinction

NEW COURSES FOR 2016-17

- AT Writing Seminar - English
- AT Tropical Ecology / APES - Science
- AT Chinese Language: History - WL
- AT Performing Arts - VPA
- AT Kinesiology - PE
- Conceptual Algebra II - Math
- Computer Science I - TEC

CHANGED COURSES FOR 2016-17

- AP Psychology and AP Human Geography are year-long courses at SAS. As they are considered semester-equivalent courses by the College Board, these two courses will receive an additional weighting of 0.25 (rather than 0.5) beginning in 2016-17.
- Behavioral Economics & Game Theory - This course replaces Decision Analysis. Students who have already taken Decision Analysis are not eligible to enroll in Behavioral Economics & Game Theory.
- Emerging Technologies - This course has been changed from year length to semester length. Students may take this course a second time if they wish to further develop the skills they acquired during the first semester.

GENERAL INFORMATION

HIGH SCHOOL DAILY SCHEDULE

TIME	CLASS/ACTIVITY
8:00 - 8:30 AM	Advisory/PLC
8:35 - 9:55 AM	Block 1
9:55 - 10:15 AM	Break
10:15 - 11:35 AM	Block 2
11:35 AM - 12:10 PM	Lunch
12:10 - 1:30 PM	Block 3
1:30 - 1:40 PM	Break
1:40 - 3:00 PM	Block 4

DAY	TEACHERS	STUDENTS
Mon	Advisory Plans	Flex: Clubs, Tutoring, etc.
Tues	Advisory Meets	Advisory
Wed	PLC	Flex & Assemblies
Thur	Advisory Meets	Advisory
Fri	PLC	Flex: Clubs, Tutoring, etc.

GRADUATION REQUIREMENTS

Required Courses in Specific Academic Areas	Minimum Credits	Recommended for College
English	4.0	4
Mathematics	2.0	4
Science	2.0	3-4
Social Studies*	2.0	3-4
Language (level requirement)**	**	3-4
Visual/Performing Arts	1.0	1
Physical Education	1.5	
Health Education	0.5	
Catalyst Project (Begins with Class of 2018)	0.5	
Minimum Total Credits***	24.0	

Clarifying Details

*Social Studies: US citizens (not dual citizens) are required to earn one credit in U.S. History.

**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 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.

SCHEDULE CHANGES

Please select courses carefully! Since returning students have opportunities in April and May to select and adjust their course requests, in August students must remain in their assigned courses for the first two days of the school year. This allows counselors to focus on assisting students who are new to SAS. Following this two-day moratorium, students who have a schedule problem are allowed to speak with a counselor and request changes. The add/drop period ends after the eighth school day. All requests must be for educationally sound reasons and approved by a counselor. Requests for changes must move a student from a larger section of a course to a smaller one. Students are also required to speak with their parents about proposed changes. At the beginning of the second semester, except for newly arriving students, no schedule changes can be made on the first day back in January. The add/drop period for second semester courses concludes on the fourth day of the semester.

Seniors must list the courses for the entire senior year when they apply to colleges. Should a change in a second semester course be made, colleges must be notified of those changes. Should it appear that a student is choosing 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 drop/add policies.

ADVISORY

The Singapore American School Advisory program was established in 2015. It seeks to ensure that every student is known, cared for and guided; make our “big school feel small;” support students with solving real-world problems; strengthen students’ sense of identity and belonging; and recognize students’ individual learning experiences and talents.

Each advisory is composed of 10 to 12 students in the same grade who are assigned to a faculty advisor during their first year at SAS. In most cases, students will stay with the same advisor until they leave SAS. Advisory groups meet every Tuesday and Thursday morning from 8:00 to 8:30 AM.

Advisory focuses on improving students’ interpersonal and intrapersonal skills, their cultural competence and their character. These meetings are structured around the content and behaviors needed to: 1) best ensure the social/emotional health of all students; 2) improve academic success; and 3) prepare students for the inevitability of change in their lives, including the transitions to HS, 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.

THE SAS CATALYST PROJECT

Beginning with the Class of 2018, the SAS Catalyst Project (previously known as the Senior or Capstone Project) will become a graduation requirement. This represents the culmination of academic, intellectual, and social-emotional learning experiences where students are provided guidance, resources, personalized support, and flexible scheduling to explore interests and pursue passions. Teachers act as “guides on the side” for students where learning is differentiated for each student based on their interest, readiness, and learning profile. The Desired Student Learning Outcomes (DSLLOs) of communication, collaboration, critical thinking, and creativity) are emphasized, developed, and assessed. As students design, plan, and conduct their projects, they will focus on producing a tangible outcome and encouraged to dive deep into relevant content and knowledge as needed.

Often, students experience real world learning and problem solving in authentic contexts (e.g., interviews, work study, scientific research, internships, apprentices, etc.). By identifying, establishing a relationship with, and working alongside a mentor from a relevant field or profession, students will be taught how to interact with our rich regional and global professional network. The project scope is limited only by the student’s imagination.

Although the Project is designed primarily for second semester juniors or first semester seniors, students may also wish to consider enrolling in Catalyst as second semester seniors. Students who are interested in an earlier start may be allowed to participate with permission from the Center of Innovation Coordinator, Dennis Steigerwald.

RATIONALE FOR REQUIRING THE SAS CATALYST PROJECT

- At the beginning of the 2014-15 school year, credit requirements for students were reduced in Physical Education (0.5 credits), Social Studies (1 credit), and TEC (1 credit). This reduction created more voice/choice for students in the course selection process and provided additional room for students to meet the Catalyst requirement (0.5 credits).
- Fosters development of our Desired Student Learning Outcomes (DSLLOs) including Communication, Collaboration, Critical Thinking, and Creativity.
- A focus on inquiry versus direct instruction, depth of understanding over breadth of topics covered, and production over consumption of information.
- Students are encouraged to think critically, be self-sufficient, develop professional communication and collaboration skills, i.e., skills that will help prepare them for college, modern careers, and adult life.
- Learners grapple with complex, and challenging real-world situations. Mistakes (and sometimes failures) are seen as an opportunity for growth.
- Additional resources and time for students to pursue academic pursuits such as online courses, off campus classes, coaching, etc.
- Greater flexibility in scheduling so students

can explore experiential, hands-on learning opportunities like apprenticeships and internships.

- Students demonstrate their proficiency with the skills they have gained at SAS and can include this information on their applications to colleges and universities.

SUPERVISED STUDY PROGRAM

The Supervised Study Program is designed to offer additional support for students who are academically at-risk by providing in-school supervision and structure during “free blocks.” SAS students are traditionally afforded the privilege of an unscheduled block (80 minutes every other day) during which they are allowed to make choices about their use of time; however, some students do not use their free time in a productive manner and need a more structured location in which to study.

A teacher may temporarily place students into Supervised Study as a way to assist students before they fail. Students found to be struggling in their learning may be placed in Supervised Study until specific tasks are completed or skills are mastered.

In addition to teacher placements, students are required to join Supervised Study based upon poor grades at mid-semester progress time and at the end of each semester. This placement is automatic and is based solely upon the posted grades. Placement in Supervised Study continues until new grades are finalized nine weeks later.

A student who is in eighth grade will be placed in Supervised Study if at the grades at end of eighth grade were poor. Students who are new to SAS are placed in Supervised Study upon their arrival should the grades at their previous school warrant it.

As long as there is room in the class, a counselor can add a student to Supervised Study. Full details and eligibility criteria for Supervised Study program can be found in the *Student Handbook*.

DECEMBER GRADUATION

Although students are expected to attend high school for eight semesters prior to graduation, in unusual circumstances a student may request

to graduate one semester early in December. Ordinarily these circumstances involve a family leaving Singapore midway through the senior year, attendance at a university that begins the academic year in January or February, or a student who transferred to SAS from a high school that followed a different academic calendar (e.g., a student completed one semester of grade nine in the Australia system prior to beginning SAS as a new ninth grader so three semesters of grade nine were completed).

A student or parent interested in pursuing early graduation must speak with a counselor to determine if it is possible to earn all required credits by December of the senior year. If it is, a formal request to graduate early must be submitted to the Principal by May 1st of the junior year. This request should explain the rationale and be signed by both the student and the parents. Full details are in the *Student Handbook*.

COLLEGE PREPARATION

SAS students are assisted in the process of selecting and applying to colleges and universities by an experienced team of SAS counselors. The counselors are highly regarded in the college admission community, have visited hundreds of campuses, hold leadership positions in international admission organizations, have received international awards, and are invited speakers at college admission conferences.

With nearly 300 college admission officers visiting SAS each year, the counselors are well versed on what students need to do to maximize their chances of admission. A sequential plan of activities has been put in place to help students maximize their chances of admission, and to help both parents and students to navigate the selection and application process.

A college wants to admit students who were happy and successful in high school because that predicts they will be equally happy and successful when they arrive on campus. To improve the chances of college admission, high school students should focus on having a great high school experience.

U.S. COLLEGES & UNIVERSITIES

A U.S. university admission officer reviews an application in this order: They look at grades first, then rigor, then test scores, and then personal characteristics, leadership and any other factors they deem important. High school grades in academic subjects predict college success better than SAT scores, recommendations, essays and everything else. The more successful a student has been in high school, the more likely the student will be admitted.

Each successive academic year is seen as more predictive of college success than the previous one. Grades from the junior and first half of the senior year are most predictive because those courses are more similar to college level courses. Colleges look at the entire transcript considering both the student's performance and course rigor.

When choosing high school courses it is important to take a challenging academic program *but more importantly, one in which high grades can be earned*. The level of academic challenge will vary from one student to another and from one

subject to another. Students shouldn't choose courses because friends did, nor should courses be chosen simply because someone says that the name will "look good" on a transcript. Grades trump rigor. Choose courses based on what is best for the student.

When taking courses next year that are more challenging than the courses this year, additional homework time will be required each day. Taking more difficult courses while not increasing homework time means grades will drop. To earn higher grades while taking harder classes students must plan on dedicating significantly more time each day. Students must be realistic about what they can and will do.

Finally, remember that U.S. university admission officers are looking for students who contribute to their school or community and do something besides just study. Students should choose a set of courses that will allow time to be involved in one or more aspects of the high school community.

NON-U.S. UNIVERSITY ADMISSION

Each year about 20% of the SAS graduates choose to apply to colleges in locations such as Canada, the UK, Australia, Singapore, Korea, Japan, and New Zealand. Each of these countries reviews applications differently. There is information on the SAS High School Counseling website about these countries and the information they use in their admission review.

Applying for admission to UK universities is very different than the process used in the US. One major difference is that students are required to be certain of their course of study at the time of application. Unlike in the U.S. where students can apply as "undecided," there is no such thing as "undecided" in the UK. Students must be prepared to launch into a quite specific course of study, and to stay with it for three years or until the degree is completed.

Successfully completing Advanced Placement (AP) exams related to the proposed course of study is vitally important for students applying to the UK. Exam results, along with a student's background and experiences related to the plan of study, will result in an offer of admission - or not. For UK bound students, results on AP exams are so important that a final offer of admission is typically not made until after AP results are available following graduation. For students applying to

the UK, it is important that an early decision be made on the course of study and relevant AP courses (with high scores) are completed. The SAS counselors are happy to provide additional information about AP course choices and how they relate to admission in the UK. Additional information about UK university admission is also on the High School Counseling Website.

ADVANCED PLACEMENT (AP)

SAS offers Advanced Placement (AP) courses for students who wish to pursue college-level study while they are still in high school. The AP program gives students the opportunity to show what has been learned by taking an AP exam. Based on exam scores, colleges may choose to grant credit, advanced standing, or both. Students who enroll in an AP course are expected to sit for the AP exam in May. Most students do not begin taking APs until grade 11 or 12.

While AP exam results can provide credit for a U.S. college course, most high school students are more interested in being admitted to the college than getting credit for a course after enrollment. For U.S. colleges, the grades listed on transcripts are much more important than AP exam results. Results for senior year AP exams are not available until July - long after admission decisions are made.

Students who enroll in AP courses will be expected to undertake rigorous and sophisticated assignments and to work independently. Most AP courses require multiple page papers and research. It is important to be realistic about the level and number of AP courses selected. Taking too many and earning low grades hurt rather than help admission chances.

An AP Capstone option was introduced at SAS in 2014-2015 when the AP Capstone Seminar course was first offered. The AP Capstone Research course was subsequently made available in 2015-16. Information about these courses can be found in the TEC section. To earn the AP Capstone Diploma, students must complete the AP Capstone Seminar, the AP Capstone Research course the following year, plus four AP courses and exams with a minimum score of 3 on each one.

ACADEMIC LOAD

The minimum SAS graduation requirements are just that - minimums. All students should look at the "recommended for college" rather than the "minimum credits" column. Students should speak to teachers and counselors for advice on exactly which courses to take. Remember, while it is important to take challenging courses, it is equally important to choose courses in which good grades can be earned. Earning a C, D or F is never impressive, whether it is in a regular, honors-equivalent or AP course.

There is no specific number of AP or advanced courses required by a selective college. While they are looking for academically able students who have challenged themselves academically, they also want students who have contributed to their school or community. Students should not take such a heavy load that they will not have time to be involved in the life of SAS. Colleges do expect students to challenge themselves, but if a couple of advanced courses would be too much, take standard academic courses where strong grades can be earned.

Academic performance is more important than rigor, but admission officers consider both. Taking overly challenging courses and performing poorly would certainly hurt a student's chances of admission.

For hyper-selective colleges, academic success is just the first step. Most of their applicants are academically talented. For those colleges admitting less than 20% of the applicants, excellent grades are not enough. Students also need to be interesting, involved, and have something which compels the college to admit the student.

GPA CALCULATION

Each high school calculates a GPA differently. At SAS all courses completed at SAS are included in the GPA with advanced courses being weighted. Since each high school uses a different set of grade weighting, most colleges recalculate each student's GPA. They may drop the weighting, eliminate elective, PE and art classes, or discount freshman grades completely. Rather than focusing on a GPA, admission officers review an entire transcript to see the overall number of As, Bs and Cs, while carefully considering the course load. While students sometimes focus on their GPA,

a college will definitely take the time to review an entire transcript paying more attention to the grades earned in the academic core courses.

CO-CURRICULARS

An important part of any high school experience is the co-curricular area. SAS offers a rich array of activities in such areas as music, dance, drama, sports, community service, student government, journalism, cultural clubs, academic and special interest clubs. Most clubs meet during one of the breaks or between 3:15 and 4:15, with athletic practices starting at 4:15. Some activities, including most of the journalism and music activities, are actually an extension of a class and are limited to students in those classes, though they will involve after-school participation. Other clubs, such as the Art Club, are related to a class but meet after school and membership is not restricted to class members. A complete list of activities is available from the Athletics/Activities Office and the high school website. A club fair is held each August where all of the different groups explain what they do and ask students to join them.

Co-curricular activities can play a big part in distinguishing a student from other applicants, with quality and commitment being much more important than quantity. Colleges are pleased to see students who are passionately committed to a few activities. Leadership positions demonstrate commitment and say something positive about the student. Just like it is better to take three years of French than to take one year each of French, Chinese, and Japanese, it is better to spend three years rising to a position of importance on the student council than it is to join every organization the school has to offer.

Johns Hopkins University has said: "A common misconception is that university admissions officers are looking for each student to be 'well-rounded,' whereas we are looking for a well-rounded freshman class, depth being valued over breadth. A combination of both is ideal." Involvement in high school activities tells admission officers how much a student will likely contribute to campus life.

But remember, extracurricular activities can only do so much to make up for less than stellar grades. Students overly involved in extracurricular activities may find their grades suffer as a result. No list of activities will make up for mediocre grades. Highly selective universities, expect high

school students to demonstrate leadership - and also make As.

COLLEGE ADMISSION TESTING

For students applying to the U.S. the answer to, "How important is the SAT or ACT?" is a complex one. There are now hundreds of colleges that no longer require the SAT or ACT because they have found the scores do not predict college success. Included on this list are New York University, Wake Forest, Middlebury, and American University. While some colleges have dropped the testing requirement, the fact remains that most highly selective colleges (those rejecting 90% or more) expect that all parts of the application - including the SAT or ACT - to be strong.

The best way to improve SAT scores is to read a lot and to take appropriately challenging academic courses. No amount of SAT or ACT preparation will help if a student stops taking math. The reading and writing in a challenging social studies course will help students with the reading and writing sections of the SAT and ACT.

While doing well in classes is the best SAT or ACT preparation, practice can also help. All tenth and eleventh graders take the PSAT, the practice test for the SAT Reasoning test. The PSAT is given during the school day in October.

Students should take either the SAT Reasoning or the ACT (or both) during the second semester of the junior year and probably again early in grade 12. Since many U.S. colleges require students to submit all SATs completed at any time in high school, students should postpone the ACT or SAT until the second half of grade 11. The test is designed to test students in the second half of grade 11 - not earlier.

About 50 U.S. colleges - generally the most selective ones - require tests in addition to the SAT called the SAT Subject Tests. These are one-hour multiple-choice tests offered in academic areas such as biology, language, literature or history. If they are required, students ordinarily take two of these tests in May or June of the junior year at about the same time the most advanced course in that subject area - typically an AP course - is completed. Taking more than two is rarely helpful. Most U.S. colleges will accept the ACT plus Writing in lieu of SAT Subject Tests. Unfortunately the testing policies vary from university to university so check with a counselor for advice.

For strong students who might be applying to one of the 50 or so colleges requiring the SAT Subject Tests, students must choose two courses that will provide preparation for these exams by the end of the junior year. Remember, many schools do not ask for Subject Tests or use them in the admission process. If a college doesn't ask for SAT Subject Tests it is unnecessary to take them. Those that do use them only expect students to submit two. Very few strong students have difficulty in completing the required SAT Subject Tests.

Additional details about the SAT and ACT are on the testing section of SAS High School Counseling website and will be explained by the SAS counselors.

“FAMILY CONNECTION”

SAS high school students are given individual user names and passwords to access Family Connection, our online college information system. Some of the features of Family Connection include a student's ability to:

- View individualized displays of personal academic information and test scores.
- See historical high school grades and develop a four-year plan.
- Complete career and interest inventories, which can be especially helpful to students considering universities in the UK
- View admission data on SAS graduates who applied to colleges. Scattergrams plot the cumulative GPA, best SAT score, and whether the student was admitted or denied.
- Search for colleges and start a list of potential schools to explore more in depth.
- Get automatic e-mail reminders about colleges visiting SAS.

Family Connection is a powerful program and is used by students and counselors for all four years of high school. Ninth grade parents are given account information in the middle of the freshman year. Parents of current high school students who do not know how to login should contact the Counseling Office.

ENGLISH

The English curriculum focuses on the areas of writing, speaking and listening, and reading and viewing. Each area will be assessed in every English course in various ways, and 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 freshmen must take English 9 or World Studies, while sophomores must take English 10 or American Studies. Upperclassmen may opt to take any of the following courses during the junior and senior years: AP English Language and Composition and AP English Literature (both year-long), or a combination of the semester-length Junior/Senior menu courses.

While all of the following courses can be used to fulfill the four credit SAS English graduation requirement, please note that there are some that do not meet the English requirements set by some outside organizations. The National Collegiate Athletic Association (NCAA) reviews all core courses at all high schools and makes an independent assessment on whether they are considered substantially comparable to a traditional core course. If you are a talented athlete who could potentially play a sport in a US college, be aware of the handful of non-traditional SAS English courses that are not certified by the NCAA.

FAQ: Should a ninth grader choose English 9 and World History or the combined double block World Studies course?

World Studies meets every day and challenges students to dive more deeply into the core knowledge covered, empowering students to make meaningful connections across disciplines. Students will benefit from this structure if they prefer a thematic (not chronological) approach to learning content and skills. In addition, because of the extended time with their peers and teacher, students will be able to further develop, and benefit from, a positive class environment. School transcripts will not reflect independent grades for English 9 and World History, but instead will note one grade for World Studies. Consequently, to be successful, a student will need to both thoughtfully understand the content introduced, but also master the skills of speaking persuasively, writing effectively and reading analytically. Students will

be expected to consistently research and share their perspectives in collaborative environments. The methods and thinking emphasized in this course will prove beneficial when students are asked to choose and develop an interdisciplinary SAS Catalyst Project during the senior year.

World Studies (English 9/World History)

ID: 41005 Grade: 9 Length: Year

Credit: English/Soc Studies (2)

Note: Double block/credit in English and History

This interdisciplinary course is a thematic study of the human experience using the lenses of history and literature with a focus on skills development. Using the themes of identity, power, discovery and networks, and revolutions students will explore how individuals, communities, nations and the world have responded and continue to respond to the evolving challenges of their environment. World Studies will introduce students to a variety of literary genres and world history topics to provide students with the knowledge and skills needed to better answer the question: what does it mean to be me? This interdisciplinary course will meet every day, and students will earn both an English and social studies credit.

Reading and Viewing – Using a genre approach, students will study short stories, novels, poetry, drama, and non-fiction - specifically scholarly journals and articles; religious texts, government documents and other primary sources; memoirs; and secondary sources. All students will read and study a memoir, *Romeo and Juliet*, *Lord of the Flies*, and *World War Z*, but will also analyze shorter literary and non-fiction extracts that relate to the themes and major eras in world history. Students will develop skills in critical observation and creative representation by viewing and discussing films and other media.

Writing – The course emphasizes the structure and conventions of written English and provides a variety of writing opportunities. Some assignments will stem from a student's own experiences and observations, while others will focus on responses to class texts. Students will write informative, argumentative and narrative pieces, including a research paper using primary and secondary sources. Vocabulary study is an integral part of the program.

Speaking and Listening – Class reading of literature selections, individual and group presentations, and class discussions in small and large groups all contribute to the enhancement of the students'

speaking skills. Students will practice careful and critical listening when taking notes on lectures, attending to readings and presentations, and participating in class discussions.

Students will be challenged to demonstrate the development of their skills and understandings in a final culminating project.

English 9

ID: 41012 Grade: 9 Length: Year
Credit: English

English 9 is a traditional Language Arts course which focuses on writing, reading, speaking/listening, and language skills in addition to a year-long vocabulary study of Greek and Latin prefixes, roots, and suffixes.

The written assignments in English 9 will build from a foundation of how to manage and organize primary and secondary source material, using each in increasingly sophisticated writing tasks. Writing opportunities for students include the literary analysis essay, the comparison and contrast essay, the research paper, and creative writing.

Reading for English 9 focuses on the skill of inferring meaning from text. Students will spend time with many titles from the high school canon, including *Of Mice and Men*, *The Absolutely True Diary of a Part Time Indian*, *To Kill A Mockingbird*, *Oedipus Rex*, *Antigone*, and *Romeo and Juliet*, and English 9 students will practice increasingly-complex inferential reading skills throughout the school year. Students will also read poetry, short story, non-fiction, and literary criticism.

Speaking and listening in English 9 is assessed in two ways. In one repeated setting, students learn how to participate in a high-school level discussion by supporting their thinking with textual evidence from their readings. In another, students prepare and deliver a formal presentation based on their research-based findings.

Language study in English 9 allows students to define their knowledge of syntax. During the first semester of the course, students practice and hone their skills for writing the four main syntactic patterns in English. During the second semester, students then learn to develop more sophisticated syntax by learning how, when, and why to add phrases to their independent and dependent clauses. "

American Studies (English 10/US History)

ID: 41014 Grade: 10 Length: Year
Credit: English/US History (2)

Note: Double block/credit in English and U.S. History

This course is a thematic study of the American Experience through the lenses of history and literature, with a focus on skills development. Through the thematic units "Making a Nation," "All Men are Created Equal?," "The American Dream," and "Conflicts and Resolutions," students will explore critical issues, individuals and turning points in the history of the United States of America. Students will analyze the extent to which ideologies, people, literature and events developed and shaped both American history and its contemporary issues. Students will be challenged to think critically and to make thoughtful connections as they draw on a variety of resources to understand the American Experience. This interdisciplinary course will meet every day, and students will earn both an English and a U.S. History/Social Studies credit for completing the course.

Writing – Students will develop their writing in a variety of genres (e.g. persuasion, narration, analysis, synthesis), responding insightfully to both literature and history and they will pursue class-related areas of interest for their research projects. Language usage and mechanics instruction will focus on the problems evident in the students' writing.

Speaking and Listening – Students are expected to participate fully in class discussions, work in small groups, and make at least one formal presentation per unit, with a focus on persuasive speaking skills.

Reading and Viewing – Students will critically read a variety of nonfiction (e.g. academic articles, primary source documents), fiction (e.g. novels, short stories), drama and poetry reflecting the American Experience; the history text will be *The Americans* (Holt McDougal). Students will continue to develop skills in visual literacy by critically viewing documentaries and films. Students will be encouraged to read widely outside of class in order make connections.

English 10 - American Literature

ID: 41013 Grade: 10 Length: Year
Credit: English

English 10 is a survey of American Literature. Throughout the course, students are asked to

think critically and reflect on two key questions: *Who or what is an American? Is the American Dream a myth or reality?*

Writing – In the tenth grade, the form and structure of the short essay are stressed, and the quality of writing is enhanced through the application of the writing process. Students will write in a variety of modes and styles (e.g. argumentative, narrative, informational, synthesis), with a focus on persuasive writing and research. Language usage and mechanics instruction focuses on the problems evident in the students' writing. The study of vocabulary is continued.

Speaking and Listening – At the tenth grade level the course emphasizes the discussion of literary selections and oral reports to emphasize the skill of persuasive speaking.

Reading and Viewing – Students will read a variety of fiction, nonfiction, and poetry reflecting the various literary periods in American Literature. Students will study texts chosen from *The Catcher in the Rye*, *The Adventures of Huckleberry Finn*, *The Great Gatsby*, *Nickel and Dimed*, *Outliers*, *The Crucible*, and *A Raisin in the Sun*. Students will also read at least one American play and participate in literature circles using texts that examine current issues and the minority experience in America. Students will continue to develop skills in critical observation and creative representation by viewing videos of films and short subjects.

JUNIOR/SENIOR OPTIONS

The Junior/Senior Options continue the development of skills and intensive study of literature of a college preparatory English sequence. These semester-long courses cover diverse bodies of literature from various periods and cultures. All of the courses develop writing, reading, viewing, speaking, listening and technology skills.

Writing – Students will compose a variety of writing assignments, such as personal essays, literary analysis, 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.

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.

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

SEMESTER I OPTIONS

Advanced Composition

ID: 41041 Grade: 11-12 Length: Semester I
Credit: English

This course is designed for students who wish to pursue creative writing, and to learn first-hand how creative writers work. Using an intensive workshop format, both in class and online, students will learn specific forms of creative writing, develop a peer community of writers to critique and support each other, and create an individual portfolio of creative work. Students will submit their works to outside publications and select and perform their own works for a student-developed public reading at the end of the semester.

American Literature

ID: 41008 Grade: 11-12 Length: Semester I
Credit: English

American Literature focuses on literature's presentation of changing roles, values, voices and attitudes in post-World War II America. Students will read and view selected drama, novels, non-fiction and poetry. Readings will be taken from the following: *Miller's Death of a Salesman*, *Cullen's Columbine*, *Kesey's One Flew Over the Cuckoo's Nest*, *Stockett's The Help*, *Diaz' The Brief Wondrous Life of Oscar Wao* and *Gruen's Water for Elephants*. Students will complete a variety of writing assignments, including blogs, analytical and narrative writing, along with individual and group discussions and presentations. They will have choice for their final reading assignment and project.

British Literature: The World of Shakespeare

ID: 41006 Grade: 11-12 Length: Semester I
Credit: English

In this course, students will study Shakespeare's works in depth, critically reading at least one play from each of his four genres (history, comedy, tragedy and romance), along with sonnets and

other poetry. Supplementary readings will include recent articles and scholarship about Shakespeare and Elizabethan England and the development of Shakespeare's language; in addition, students will critically view films and performances (if possible) of the plays. In response to the readings, students will write in a variety of genres (e.g. persuasion, narration, critical responses) and participate in shared inquiry discussions and presentations.

Lit and the Imagination (Science Fiction)

ID: 41011 Grade: 11-12 Length: Semester I
Credit: English

Students in this course will study the three stages of Science Fiction: Gothic/classic science fiction period (1818 – 1926); the modern period (1926 – 1960s); and the contemporary period (1960s – present). Through the study of the literature of these three periods students will examine the philosophical (ethical), scientific, and political ideas developed in science fiction literature. Key ideas include: the ethics of science and the responsibility of the scientist, the conflict between man and technology, man's relationship to nature, the individual against society, mankind meeting alien species, social problems highlighted in science fiction literature and film, and how science fiction literature can help with the problem of "future shock." Students will also explore the relationship of science fiction literature to the novel and film. Consequently students will analyze both written text and film. The variety of classic writers includes *H.G. Wells*, *Mary Shelley*, *Arthur Conan Doyle*, *Jules Verne*, *Nathaniel Hawthorne*, *Rudyard Kipling*, *Herman Melville*, and *E. M. Forster*.

Reading, Writing and Publishing in a Digital World

ID: 41024 Grade: 11-12 Length: Semester I
Credit: English

Note: This course was previously named Media Literacy. If a credit was earned in that course, you cannot retake it under this new name.

This project-based course examines the textual relationship between literary style and content, examining how it has evolved over time. We examine how the tools of expression—the spoken word, the pen, the printing press, the radio, the television and the internet—have changed the ways we describe, explain, persuade and narrate in the world. By reading and writing many different forms, students will better understand how to interpret the written world and publish work with a greater awareness of the effects on different

audiences. This course is designed to help students think critically about and responsibly within the digital age. With the Common Core Standards as a framework, student will plan, write, revise, produce, record, film, publish and evaluate their own work, creating a body of writing to take with them in their personal portfolio.

SEMESTER II OPTIONS

Asian Literature: An East-West Perspective

ID: 41019 Grade: 11-12 Length: Semester II
Credit: English

The focus of this course is on issues and themes relating to Southeast Asia and East Asia. Students study the perspectives of Asian, American and European writers located both in Asia and in the West. Reading texts in translation, as well as those originally written in English, students consider religious, economic, socio-cultural and political representations of Southeast and East Asia. Students will have opportunities to explore a question in-depth, such as What's the difference between a Sage and a Saint? or How do ideals of "masculine" and "feminine" compare, East and West? Students will write in a variety of genres (e.g. critical responses to literature, synthesis, research), participate in shared inquiry discussions and deliver presentations.

Studies in Satire

ID: 41022 Grade: 11-12 Length: Semester II
Credit: English

This course will provide students with a broad sense of satire in terms of how it has been defined and practiced. Thus, students will begin by briefly discussing several approaches to explaining the basic concepts of satire. These efforts seek to explain satire's long and successful run as a literary genre and to clarify just how satire works. After establishing a critical lens through which to view satire, students will study classical examples of satire primarily from the eighteenth through the twentieth centuries using texts such as *Being There*, *Brave New World*, *The Handmaid's Tale*, *The Malcontents*, and *Cat's Cradle*. All the while, each week students will also be keeping tabs on twenty-first century satire. Overall, the course seeks to enhance students' critical thinking skills by closely analyzing the criticisms inherent in works of satire.

World Literature: Myths and Monsters

ID: 41017 Grade: 11-12 Length: Semester II
Credit: English

The monster is a figure as old as literature itself. From the myths of the Greeks to the Biblical Leviathan, monsters of various kinds have roamed the landscapes of our imaginations. This course asks, what is a monster? Why do people seem fascinated with the grotesque, the outcast, and the evil? How are monsters portrayed in literature and other art forms? We will examine novels and stories that feature classic and contemporary visions of vampires, demons, ogres and perhaps the most frightening monster of all - mankind.

21st Century World Classics (Prize Winning Lit)

ID: 41009 Grade: 11-12 Length: Semester II
Credit: English

This course will engage students in reading contemporary, prize-winning literature. Students will use award criteria to judge literature in a variety of genres. They will explore why some literature may win the favor of the critics but not make a best-seller list (and vice versa). The course emphasizes critical thinking and discussion skills in a book-club /literature circle format. As these texts are relatively new to bookshelves, and very little critical literature is available about them, students will play an integral role in creating new knowledge about the texts based on class discussions and interpretations. Students will be expected to write critical reviews, literary responses, and give presentations. Books will be selected from those winning awards such as Pulitzer Prize, the National Book Award, the PEN, the ALEX, the Orange, the Booker, the Hugo and the New York Times best-seller list.

Communications (TED Talks)

ID: 41031 Grade: 11-12 Length: Semester II
Credit: English

Note: For potential college athletes, this course does not meet the NCAA Division I core course requirement for English. See counselor for details.

This course will enable students to develop fundamental skills in formal and informal oral communication. Students will be exposed to lessons on how communication affects our lives, the process of communication, listening skills, interpersonal communication, building confidence, structuring speeches, choosing effective language, media studies, and speech delivery. The first quarter of the course will focus

on building the skills required in public speaking by practicing the following types of speeches: Oral Interpretation of Literature, Original Oratory, Impromptu Speaking and Storytelling. Students will also learn specific strategies required for both Shared Inquiry and Socratic Seminar discussions. The second half of the course will be spent doing a Project-Based Learning unit culminating with each student preparing and giving a TED Talk in a public setting. This unit will allow students to pursue their passions by doing research, organizing and producing a multi-media presentation imitating the famous TED Talk series.

ADVANCED OPTIONS (AP AND AT)

AP English Language and Composition

ID: 41028 Grade: 11-12 Length: Year
Credit: English

Prerequisite: Semester I grade of B+ or higher in English 10/American Studies required to select this course as an 11th grader or teacher recommendation.

The AP Language and Composition course is primarily a course in both effective writing and critical reading. This course engages students in becoming skilled readers of prose written in a variety of periods, disciplines, and rhetorical contexts and in becoming skilled writers who compose for a variety of purposes. Readings will involve four general areas: science and technology; government and politics; art and literature; and philosophy and religion. Students planning to take AP Language and Composition as a junior are cautioned: successful completion of the course requires a much greater effort and is significantly more demanding than English 10.

AP English Literature and Composition

ID: 41029 Grade: 11-12 Length: Year
Credit: English

Prerequisite: AP English Language or Semester I grade of B or higher in an 11th grade semester length English course or teacher recommendation.

This course is designed for upperclassmen who have demonstrated a commitment to the critical study of literature and the study and practice of writing. Through speaking, listening, and reading, but chiefly through the experience of their own writing, students will become more aware of the resources of language and more adept at formal analysis of literature in terms of both form and content. The focus of this course is the in-depth analysis of literature in a variety of modes: Greek drama, Shakespearean drama, the novel, satire,

the essay, and poetry. The AP curriculum is not specifically prescribed and may vary in content and emphasis from year to year. Works selected for study will represent a variety of modes and periods and are generally recognized as literary classics.

AT English: Writing Seminar

ID: 41045 Grade: 11-12 Length: Year

Credit: English

Prerequisite: B or higher in an AP English course, or a B+ or higher in American Studies, English 10 or a Jr/Sr Options course. Enrolled students will be required to submit a portfolio of creative writing pieces prior to the fall semester in order to remain in the course. See your English teacher for details.

This course offers an intensive, year-long, student-driven inquiry into the creative writing and publication process. The course will operate in a small writers' community to be structured on the Iowa Writers' Workshop model used in creative writing departments across the world, but scaled for a high school student. The course is designed for students who already have a regular writing process in any creative genre and can demonstrate a passion for creative writing with a portfolio of work. The course will feature a variety of units to investigate the professional writer's process, all of which will reflect student choice to some degree. These units include: regular workshops to improve drafting and editing skills, study and analysis of works and writers (based on student voice and choice) that examines process and audience as well as key ideas and craft, structured encounters with visiting local and international authors, a writer's retreat to encourage growth of relationships and community, and production of a publication of student work (print, digital, and/or performance) based on inquiry into contemporary publishing practices. This course was collaboratively developed and endorsed by Professor Deborah Appleman from Carleton College and Professor Robin Hemley from Yale-NUS in 2016. 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 a grade point weighting of 0.5.

SOCIAL STUDIES

The Social Studies Department's offerings provide students with a broad exposure to history and the social sciences. Group activities, lectures, discussions, research, writing and critical analysis are incorporated into the program. Courses will employ technology to conduct research, maintain online discussion boards, create original media, and support classroom instruction. The department encourages students to develop the ability to express their ideas and to test them against those of others. Fundamental to the work of the department is study of the past and a desire to learn from the past, for the benefit of the present and the future.

REQUIRED 9TH GRADE WORLD HISTORY OPTIONS

All SAS ninth grade students must be enrolled in either World History or World Studies - the combined English 9/World History course.

World Studies (English 9/World History)

ID: 41005 Grade: 9 Length: Year
Credit: English/Soc Studies (2)

Note: World Studies is a combined double-block English 9 and World History course. The course meets daily with the same teacher. Students can choose the double-block World Studies or separate English 9 and World History.

See the full course description in the English section.

World History

ID: 42022 Grade: 9 Length: Year
Credit: Social Studies

World History serves two purposes. The first is to familiarize students with the major ideas and themes of world civilizations. Students will examine the development of the political, economic, social, intellectual, religious and artistic traditions that have contributed to contemporary societies. Strong emphasis will also be put on the changing relationships between regions and peoples. The second purpose is to ground students on the skills needed (reading, writing, interpreting, presenting, researching, and utilizing technology) to excel throughout high school. The course will include a variety of instructional methods, from teacher-led, to student-centered. All ninth graders must enroll in this course or World Studies.

U.S. HISTORY OPTIONS

U.S. citizens (not dual citizens) are required to earn a credit in American Studies or U.S. History. Since some U.S. public universities (e.g., University of California) require U.S. History as an admission requirement, students who might be applying to a U.S. public university should complete a year of U.S. History or American Studies.

American Studies (Eng 10/U.S. History)

ID: 41014 Grade: 10 Length: Year
Credit: English/US History (2)

Note: American Studies is a combined double-block English 9 and US History course. The course meets daily with the same teacher. Sophomores can either choose the double-block American Studies or choose English 10 and either US History, AP U.S. History or any other social studies course. See the full description of American Studies in the English section.

U.S. History and Government

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

This course enables students to make intelligent judgments on societal problems of the past, present, and future. First semester topics cover the years from the Age of Exploration to 1861 and include a six-week unit in U.S. Government. The government unit features a study of the Constitution of the United States and the legislative, executive, and judicial branches of the federal government. Developments of economic, cultural, and political patterns as well as the changing demographics of America up to the Civil War are stressed. Second semester topics cover 1861 to the present day including Reconstruction, industrial and socioeconomic events of the late 19th and early 20th Centuries, the development of Imperialism, the reform movement, the World Wars, and 20th Century U.S. Foreign Policy.

AP U.S. History

ID: 42036 Grade: 10-12 Length: Year
Credit: US History

Prerequisite: Semester I grade of A or better in World History/World Studies is required to select this course in grade 10; a B or higher in a 10th or 11th grade regular social studies course, or a C+ or higher in an AP social studies is required to select this course in grades 11 or 12

This introductory college-level 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 mere memorization of the material. Students are required to be internally motivated, to have good reading and comprehension 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 in-class discussions based on assigned readings, as well as numerous interpretive essays and a major research paper. The AP exam grades students in three areas - 50% multiple choice, a Document Based Question (DBQ), and two standard essays. The multiple-choice questions require students to have specific, detailed knowledge of the subject matter. The DBQ gives students a number of historical documents on a topic, poses a question, and then asks for feedback. The two standard essays require a clear writing structure, an ability to show cause and effect, and some factual detail to support a particular point of view.

HISTORY, CULTURES AND GEOGRAPHY OPTIONS

When colleges and universities indicate a certain number of history courses should be completed, they are expecting students to take history courses that are empirically based and promote critical thinking and questioning regarding historical events and perspectives. The following courses, plus the World History and U.S. History courses listed above, would meet a college's admission requirement for core history courses.

History of China

*ID: 42003 Grade: 10-12 Length: Semester
Credit: Social Studies*

This course provides an overview of the forces and events that have molded modern China. Beginning with the great philosophical and dynastic traditions and their role in Chinese life, the course will continue through the turbulence of the 19th and 20th centuries. The continuity of Chinese civilization will be emphasized, and past ideas and actions will be related to current events in China and the world.

History of Japan

*ID: 42007 Grade: 10-12 Length: Semester
Credit: Social Studies
Note: Not offered in 2016-17*

This course provides an overview of the history and geography of Japan. Emphasis will be placed on understanding Japan today. Students read and analyze historical documents as well as engage in group activities where they will discuss and debate their ideas. Skills such as note taking, essay writing and public speaking are stressed.

History of Malaysia and Singapore

*ID: 42007 Grade: 10-12 Length: Semester
Credit: Social Studies*

This course provides an overview of the events and forces that have created the modern nations of Malaysia and Singapore. Students will examine the common cultural and historical background of the two countries, as well as the impact of geography and location on their histories. The role of foreign empires and colonial powers will be examined, along with the forces at work and the courses followed in their independence movements. Emphasis will be placed on Singapore and Malaysia today. Students will examine their societies, cultures, economies, and political development through simulations, independent research, lectures, and class discussion.

History of India

*ID: 42004 Grade: 10-12 Length: Semester
Credit: Social Studies
Note: Not offered in 2016-17*

This is a survey course of the history and culture of the Indian Subcontinent from the pre-Aryan Indus Valley Civilization to the 20th Century. The basic tenets of Hinduism, Buddhism and Islam will be studied, along with the strains created for nation-building in a society that is home to multiple religions. Students will investigate the historical role of the British Raj, the Indian Independence movement, the partition of the Subcontinent, continuing tensions in Kashmir and the civil war in Sri Lanka. Additionally, social and environmental issues will be examined, such as women's rights, poverty eradication, population sustainability, and attitudes towards climate change.

Modern Asian Perspectives

ID: 42006 Grade: 10-12 Length: Semester
Credit: Social Studies

This is a project-based class that seeks independent thinkers who are not fearful of challenges. For example, students will be required to write several medium length research/editorial type papers and will need to show superb organizational skills for a semester long project. Students will be required to participate in discussions and debates revolving around the issues examined and to seek solutions to troublesome issues. Modern Asian Perspectives, at its core, is to understand how the past connects to the present through lectures, discussions, debates, group projects and independent research. The course deals with the recent history of Asia, from pre-World War II to the present. The course will examine a variety of contemporary social and ethical issues affecting Asia. Topics range from ongoing issues such as nuclear proliferation in Iran and North Korea to the withdrawal of troops in Afghanistan.

battlefield and at home. Special attention will be paid to the link between domestic issues and foreign affairs. The wartime repercussions and lasting consequences will be analyzed to show to what extent treaties and subsequent organizations have successfully kept the world at peace. Thematic units will study war and its relation to Classical Europe, early Asia, Medieval Europe, the World Wars, the Middle East, and irregular warfare between state and non-state actors.

AP World History

ID: 42039 Grade: 10-12 Length: Year
Credit: Social Studies

Prerequisite: Semester I grade of A or better in World History/World Studies is required to select this course in grade 10; a B or higher in a 10th or 11th grade regular social studies course, or a C+ or higher in an AP social studies is required to select this course in grades 11 or 12

The purpose of AP World History is to develop greater understanding of the evolution of global processes and contacts, advanced through factual knowledge and specific analytical skills. The course will focus on change and continuity within and between cultures, allowing students to improve their analytical and persuasive writing skills. Students will explore the cultures of Asia, Africa, Europe, the Americas, and the Pacific islands. The period covered is from the Neolithic era to the present.

AP Human Geography

ID: 42051 Grade: 10-12 Length: Year
Credit: Social Studies

Prerequisite: Semester I grade of A or better in World History/World Studies is required to select this course in grade 10; a B or higher in a 10th or 11th grade regular social studies course, or a C+ or higher in an AP social studies is required to select this course in grades 11 or 12

This course is designed to introduce students to key concepts surrounding human geography. Emphasis is placed on understanding past and present trends in population dynamics, political geography, geopolitics, economic development, cultural considerations, agriculture and urbanization. Throughout the course geographic models are presented to explain trends and to predict future change. For anyone interested in world geography and current events, this course is a natural as it combines theory with present case studies. Note: Beginning in 2016-17, this course will receive a 0.25 additional GPA weighting (rather than 0.5).

Urban Planning in Singapore

ID: 42042 Grade: 11-12 Length: Semester
Credit: Social Studies

This course will build upon the AP Human Geography Cities and Urban Land Use unit. Students will study urban development in various global cities (e.g., comparing Latin-American cities with medieval European cities). Each unit will focus on a different aspect of urban design, including preservation and sustainability. Students will engage in various assignments/projects that use cities/towns of their own choice to illustrate concepts. Students will apply this knowledge to Singapore and look for themes and patterns related to various community stakeholders. Students will then focus this knowledge on a theme of personal interest to them, and which will form the basis of a 2000-word final 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 the Quays. This course may involve class field trips, and will require students to visit sites in their own time, and be responsible for conducting that field research. The text for this course is *The City*, by Joel Kotkin.

AP U.S. Government and Politics

ID: 42035 Grade: 11-12 Length: Semester I
Credit: Social Studies

Prerequisite: Semester I grade of B or higher in a 10th or 11th grade non-AP social studies course, or a C+ or higher in an AP social studies course is required

This college level course is designed to give students an analytical perspective on government and politics in the United States. The course includes both the study of general concepts used to interpret U.S. politics and the analysis of specific examples. The following are the basic concepts to be covered: constitutional underpinnings of U.S. government; political beliefs and behaviors; political parties, interest groups, and the mass media; institutions of national government; and the formation of public policy.

AP Comparative Government and Politics

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

Prerequisite: Semester I grade of B or higher in a 10th or 11th grade non-AP social studies course, or a C+ or higher in an AP social studies course is required

This college level course is intended to help students better understand the diverse constitutional, ideological, and social bases of political leadership exercised by different countries. Six countries, China, Great Britain, Iran, Mexico, Nigeria, and Russia are examined. Basic concepts to be covered are: the sources of sovereignty, public authority and political power; national and international political institutions; the relationship between citizens, state, and society; the causes and effects of political and economic change; and various areas of public policy.

BUSINESS & ECONOMICS RELATED OPTIONS

Economics is a social studies related course that seeks to analyze and describe the production, distribution, and consumption of wealth. Business and economics courses are related to social studies but are viewed by most colleges as being different than the more traditional history courses.

Business

ID: 46524 Grade: 10-12 Length: Semester
Credit: Elective - when selecting courses online, this course is found in the TEC section

Note: This course does not meet the NCAA Division I core course requirement for History. See counselor for details.

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 real-world 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 computers 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.

Economics

ID: 42008 Grade: 10-12 Length: Semester
Credit: Social Studies

Economics will provide students some insight into ways by which 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 fiscal policy, the public debt, and ways banks create money.

AP Economics (Team-Taught)

ID: 42045 Grade: 11-12 Length: Two Semesters
Credit: Social Studies

Prerequisite: Semester I grade of B or higher in a 10th or 11th grade non-AP social studies course, or a C+ or higher in an AP social studies course is required

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 team-taught course, where students proceed at the normal AP pace. A self-paced AP Economics (42046) is also available.

AP Economics (Self-Paced)

*ID: 42046 Grade: 11-12 Length: Two Semesters
Credit: Social Studies*

Prerequisite: Semester I grade of B or higher in a 10th or 11th grade non-AP social studies course, or a C+ or higher in an AP social studies course is required

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.

Advanced Economics: Globalization

*ID: 42041 Grade: 11-12 Length: Semester
Credit: Social Studies*

Prerequisite: AP Economics or an A in Economics and teacher approval

Note: This college level course is identified as the equivalent of an honors course on transcripts.

This college level course is designed to offer students an opportunity to delve deeper into the international economy than our introductory courses allow. First quarter topics include: free trade theory; barriers to free trade; foreign exchange; and international financial crises. The second quarter will address specific issues in globalization, including outsourcing, migration,

China, the EU, and sovereign wealth funds. All students will write a research paper. This course is identified as being equivalent to an honors course on transcripts.

Behavioral Economics & Game Theory

*ID: 42023 Grade: 10-12 Length: Semester
Credit: Social Studies*

Note: This course does not meet the NCAA Division I core course requirement for History. See counselor for details.

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. This course was previously known as Decision/Analysis.

Entrepreneurship

*ID: 46525 Grade: 11-12 Length: Semester
Credit: Elective - when selecting courses online, this course is found in the TEC section*

Note: This course does not meet the NCAA Division I core course requirement for History. See counselor for details.

This course utilizes the Lean LaunchPad model, which has been taught at Stanford, UC Berkeley, Columbia, CalTech and adopted by the National Science Foundation. It emphasizes experiential learning, a flipped classroom and immediate feedback as a way to engage students with real world entrepreneurship. Students learn by proposing and immediately testing hypotheses. They get out of the classroom and talk to customers, partners and competitors and encounter the chaos and uncertainty of commercializing innovations and creating new ventures. Students will do, rather than plan to do. Unlike many approaches to entrepreneurship education, Lean LaunchPad does not rely on static case studies or fixed models; it challenges students to create their own business models based on information derived from personal engagement rather than secondhand market research.

ADDITIONAL SOCIAL STUDIES OPTIONS

Social Studies elective courses can fill out a high school program with courses that allow students to experience new areas of academic interest or may help in the selection of a future career path. All of these courses strengthen general study skills, particularly analytical reading, expository writing and oral communications.

psychologists are surveyed. The renowned Public Broadcasting Service programs on "The Brain" and "The Mind" offer case histories to illustrate psychological theories. Note: Beginning in 2016-17, this course will receive a 0.25 additional GPA weighting (rather than 0.5).

Psychology

ID: 42010 Grade: 11-12 Length: Semester
Credit: Social Studies

This course focuses on the study of the mind and behavior, beginning with a brief history of psychology and a look at the work of its principal theorists. Because technological innovations have made the structure and work of the mind more accessible in the past decade, some time is spent addressing recent findings in articles and documentaries as well as the text. Principal units include The Brain, Learning and Conditioning, Memory and Thought, Altered States of Consciousness, Intelligence, Personality Theory, Abnormal Psychology, and Nature or Nurture.

AP Psychology

ID: 42050 Grade: 11-12 Length: Year
Credit: Social Studies

Prerequisite: Semester I grade of B or higher in a 10th or 11th grade regular social studies course, or a C+ or higher in an AP social studies is required to select this course

Psychology and AP Psychology represent choices. A student may choose one, or the other, or both. They use different texts. What further differentiate the two are their level, duration and purpose. AP Psychology entails additional readings, more writing, and AP practice tests. Several major oral reports will be required of each student. A student must be willing to pursue college level work. Students electing AP Psychology are expected to have demonstrated high academic achievement in previous course work and to be prepared for the rigor and fast pace of an AP section. Strong students are encouraged to enroll directly in AP Psychology, an advanced level course that introduces the systematic and scientific study of behavior and mental processes. History and methods, the biological basis of behavior, sensation and perception, states of consciousness, learning, thinking, motivation and emotion, development, personality, testing, intelligence, abnormal psychology, treatment, and social psychology comprise the syllabus. The eminent

MATHEMATICS

The mathematics curriculum is designed to meet the needs of students who have varying backgrounds, knowledge and skills, as well as diverse interests and career goals.

The goals of the mathematics program are:

- to provide opportunities for students to challenge themselves and to encourage them to do so,
- to provide students with options and wherever possible, keeps doors open to high level math offerings,
- to ensure that all students learn what they need for college success, and where possible, advancement.

All students must earn 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 math for all four years of high school.

The math department embraces the use of technology and to this end, the TI-Nspire CX CAS calculator is prescribed for all math courses.

The math department is in the final stages of our transition to the Common Core standards, the implementation of which will allow the math department to improve offerings and options for students of all abilities. Highlighted below are the changes to course offerings and sequences that will be implemented in 2016-17 and 2017-18:

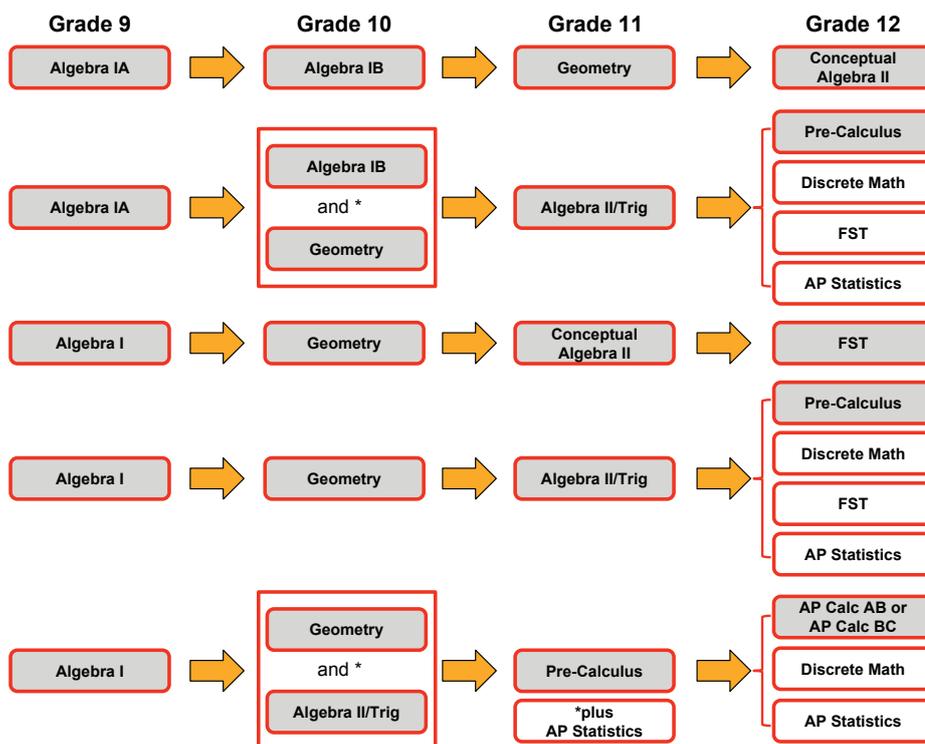
Changes for 2016-17:

- A new Accelerated Math II course will be offered. This course is the second year of a two-year honors equivalent sequence, after which students can take AP Calculus.
- A new Conceptual Algebra II course will be introduced. The course is designed to serve the needs of those students who struggle to meet standards in the Geometry course and/or for whom the Algebra II/Trigonometry course is not a viable option.
- A one year AP Calculus BC course will be offered. Students completing Pre-Calculus will be able to go directly from Pre-Calculus into AP Calculus BC if they meet the prerequisite.

Changes for 2017-18:

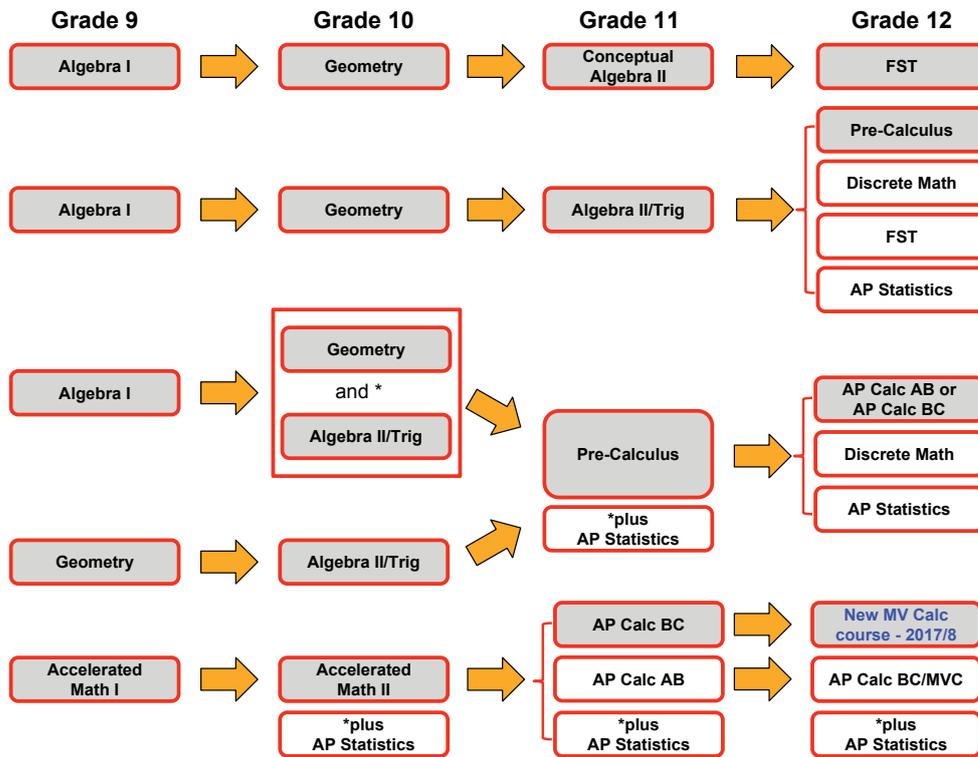
- The current AP Calculus BC/Multivariable Calculus course is being redeveloped. A new full year course offering for students who have taken the one-year AP Calculus BC course is being developed.

Middle School Math 8 Pathways - with typical sequence in grey



* Teacher approval is required to simultaneously take two math courses

Middle School Math 8+ Pathways - with typical sequence in grey



* Teacher approval is required to simultaneously take two math courses

Algebra I A

ID: 43000 Grade: 9 Length: Year
 Credit: Math
 Prerequisite: Approval from 8th grade math teacher

This course is the first of a two-year Algebra I course sequence and is designed for those students not yet ready for the rigor and pacing of a traditional Algebra I course. This two-year combination of courses gives students more flexibility in their pace of learning. Concepts will be developed over more time, with an emphasis on conceptual understanding. The course will cover simplifying polynomial expressions, properties of real numbers, solving linear equations and inequalities, graphing of linear functions, and writing linear equations. The approach used will emphasize problem solving, oral and written communication, and reasoning skills. This course is aligned with Common Core Standards with a strong emphasis on technology. Following Algebra IA, students will move on to Algebra IB and can take Geometry concurrently (with teacher approval). For the purposes of math graduation credits, Algebra IA and Algebra IB are equivalent to one year/credit of Algebra I.

Algebra I B

ID: 43001 Grade: 10 Length: Year
 Credit: Math
 Prerequisite: Algebra IA

This class is the second of a two-year Algebra I curriculum designed to help students complete the requirements of a traditional Algebra I course with more flexibility in their pace of learning. Concepts will be developed over more time, with an emphasis on conceptual understanding. The course will include: solving systems of linear equations and inequalities, exponents and exponential functions, quadratic equations and functions, polynomials and factoring and statistical analysis. The approach used will emphasize problem solving, oral and written communication, and reasoning skills. This course is aligned with Common Core Standards with a strong emphasis on technology. Following the successful completion of Algebra IB, students will be prepared for Geometry. For the purposes of math graduation credits, Algebra IA and Algebra IB are equivalent to one year/credit of Algebra I.

Algebra I

ID: 43003 Grade: 9-11 Length: Year

Credit: Math

Prerequisite: Approval from 8th grade math teacher

This is the standard high school Algebra I course designed for students who have mastered the basic mathematics skills and concepts of Pre-Algebra. Algebra I covers linear, quadratic and exponential functions, systems of inequalities and equations, and statistical analysis. The approach used will emphasize problem solving, oral and written communication, and reasoning skills. This course is aligned with Common Core Standards with a strong emphasis on technology.

Geometry

ID: 43011 Grade: 9-12 Length: Year

Credit: Math

Prerequisite: Algebra I, Algebra IA/IB or concurrent enrollment in Algebra IB and teacher recommendation. Approval from 8th grade math teacher required for 9th graders.

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 transformations, similarity, logic, triangles, quadrilaterals, polygons, triangle trigonometry, circles, and area and volume of two- and three-dimensional figures. Coordinates, problem solving, and other elements of algebra are prevalent. This course is fully aligned to Common Core standards.

Algebra II/Trigonometry

ID: 43013 Grade: 9-12 Length: Year

Credit: Math

Prerequisite: Semester I grade of C or higher in Geometry

This course focuses on developing students' algebra skills and includes a full treatment of trigonometry. Algebra topics are expanded to include polynomial, rational, exponential, logarithmic and trigonometric functions. Applications are integrated into all major topics.

Conceptual Algebra II

ID: 43004 Grade: 11-12 Length: Year

Credit: Math

Prerequisite: Geometry and current math teacher's recommendation

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 students conceptual understanding of the Algebra II topics including Rational expressions and equations, Quadratic, Polynomial, Exponential (and Logarithmic) functions, Function theory (including Parent and Piecewise functions) and finally, Probability. The approach used will emphasize problem solving, oral and written communication, and reasoning skills.

Functions, Statistics, and Trigonometry

ID: 43006 Grade: 10-12 Length: Year

Credit: Math

Prerequisite: Semester I grade of C or higher in Conceptual Algebra II or completion of Algebra II/Trigonometry

This course serves as a link from Algebra II/Trigonometry to Pre-Calculus or AP Statistics. It reviews concepts learned in Algebra II/Trigonometry and introduces most of the main concepts taught in Pre-Calculus. Functions, Statistics and Trigonometry (FST) is less rigorous than Pre-Calculus. Throughout the year students will be expected to explore data, graphs and functions. This course covers modeling, statistics, trigonometry, polynomials, logarithms and exponentials, as well as probability and counting methods.

Accelerated Math I

ID: 43014 Grade: 9-10 Length: Year

Credit: Math

Prerequisite: Math 8+ with teacher approval or Semester I Algebra I grade of an A with teacher recommendation.

This course is designed to serve highly motivated and able math students who excelled in Math 8+ or in Algebra 1 and are looking to access the highest level math offerings at SAS. It is the first year of a two year sequence that covers key content from Geometry and Algebra II/Trigonometry. The course aims to cover a broad range of topics and will therefore be high paced and rigorous. After successfully completing both Accelerated Math I and II, students will be able to enter AP Calculus or AP Statistics. On transcripts this course is identified as being equivalent to an honors level course.

Accelerated Math II

ID: 43015 Grade: 10-11 Length: Year

Credit: Math

Prerequisite: Semester I grade of B or higher in Accelerated Math I

This course is the second year of the Accelerated Math I and II sequence. It is designed to serve highly motivated and able 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 high paced and rigorous. After successfully completing both Accelerated Math I and II, students will be able to enter AP Calculus or AP Statistics. On transcripts this course is identified as being equivalent to an honors level course.

Pre-Calculus

ID: 43020 Grade: 10-12 Length: Year

Credit: Math

Prerequisite: Semester I grade of B or higher in Algebra II/Trig or FST

This course is the study of functions and function theory. Elementary functions as well as logarithmic, exponential, and trigonometric functions are studied in depth. Arithmetic and geometric sequences and series will also be studied, as are probability distributions. The course is a prerequisite for Calculus. For students who take this course during the senior year, Pre-Calculus provides an excellent foundation for pursuing math studies at the university level. On transcripts this course is designated as being equivalent to an honors course.

Discrete Mathematics

ID: 43017 Grade: 11-12 Length: Year

Credit: Math

Prerequisite: Completion of FST or Pre-Calculus

Discrete Mathematics is the study of non-continuous math, which can cover many modern mathematical concepts. This course 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, applications of matrices, recursion and difference equations, spreadsheet applications and modular arithmetic. Problem based projects will be included in the class. The course is designed for the student who wants to continue on in math and learn many real

life applications, but might not intend to pursue AP level math classes. Discrete Math students find that the topics covered in class are closely related with many things they do in other disciplines.

AP Statistics

ID: 43028 Grade: 10-12 Length: Year

Credit: Math

Prerequisite: Semester I grade of A or higher in Algebra II/Trig or Acc. Math I, or a B or higher in FST

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.

AP Calculus AB

ID: 43026 Grade: 11-12 Length: Year

Credit: Math

Prerequisite: Semester I grade of B or higher in Pre-Calculus

This course covers topics typically found in a first year calculus course at U.S. universities. The course covers limits, continuity, differentiation and integration, and their applications. Success in this course requires a solid Pre-Calculus background.

AP Calculus BC

ID: 43032 Grade: 11-12 Length: Year

Credit: Math

Prerequisite: Semester I grade of an A in Pre-Calculus

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

AP Calculus BC & Multivariable Calculus

ID: 43027 Grade: 11-12 Length: Year

Credit: Math

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

In this course, students first complete the AP Calculus BC syllabus, which covers several new integration techniques and a unit on Taylor Series. The course then covers topics typically found in a second year calculus course at U.S. universities, such as partial differentiation, multiple integration, and vector analysis. This course will be offered in its current form for the last time in 2016-17 as it is being redesigned for the 2017-18 school year.

SCIENCE

Scientifically literate individuals possess both a knowledge of facts and an understanding of concepts from a wide range of scientific disciplines. They should also have the opportunity to develop, through experimentation, the process skills that encourage and enable continuous learning and critical thinking. The goal is to develop scientifically literate individuals who understand and appreciate the interrelationships of science, technology, and society. All courses incorporate technology based laboratories (including graphical analysis software) and interactive resources.

All SAS ninth graders must enroll in a biology course. Tenth graders must enroll in a physical science course - usually Chemistry. Nearly all SAS graduates complete three years of science with most earning four or more science credits.

New high school students arriving from an "integrated science" program typically enroll in Biology, Molecular Biology, or Chemistry if arriving in grades nine or ten. After completing two years of an integrated science program, Molecular Biology, Accelerated Chemistry, or Physics are the typical choices.

LIFE SCIENCES

Biology

ID: 44005 Grade: 9-11 Length: Year
Credit: Life Science

Of all the introductory science courses, Biology can have the greatest impact on students. It has special relevance and accessibility because it is about the living world. Biology at SAS is a sequential, full year, college preparatory curriculum that integrates hands on laboratory experiences and a wide variety of technology centered activities into a dynamic program that brings key concepts to life. Five fundamental areas of Biology are investigated: Cellular biology, Genetics, Ecology, Evolution and Physiology. Factual content that elaborates these concepts is presented in ways that strive to demonstrate biological interconnection and establish actual relevance to students' lives.

Molecular Biology

ID: 44020 Grade: 9-12 Length: Year
Credit: Life Science

Prerequisite: Approval from 8th grade science teacher

Molecular Biology is an introductory biology course for above average students, particularly for those who may be interested in pursuing a college major or career in scientific fields such as medicine, engineering, or the pure sciences. Molecular Biology is a rigorous course that is taught at a faster pace than and which requires more critical reading and more daily homework than Biology. The course is a study of biology from a molecular perspective, with emphasis upon recent advances in the study of genomes, cell physiology and biological evolution. The course includes an examination of molecular and cellular structures, genetics and heredity, human anatomy and physiology, ecology and evolution, all within the framework of science inquiry. During the course students will come to understand the chemical and cellular similarities and dissimilarities of all living organisms, the great variety and beauty of life forms and functions, and the intricate mechanism and balance in all living organisms. 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 built around computer based probeware. Students enrolling in this course should be able to read at or above grade level and should have demonstrated above average achievement in previous science courses and above average scores on standardized tests. On students' transcripts, this course is designated as being equivalent to an honors course.

Biotechnology

ID: 44016 Grade: 11-12 Length: Semester
Credit: Life Science

Recombinant DNA and Biotechnology is designed for students with at least one year of biological science, who are prepared for an in-depth study of the scientific foundations and technological applications of genomic and protein biotechnology. The course emphasizes laboratory techniques and exposes students to a variety of fields including microbiology, cell biology, genetics, bioinformatics, and bioengineering. Students need a solid understanding of DNA structure and replication, protein synthesis, and gene control mechanisms. It is an excellent course for students who are considering careers

in any biological science field, such as genetics, biomedical engineering, or biomedical research.

Environmental Science

ID: 44022 Grade: 10-12 Length: Semester

Credit: Life Science

Prerequisite: Open to 10th graders concurrently enrolled in Chem or Acc Chem

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 Grade: 11-12 Length: Semester

Credit: Life Science

Forensic Science is designed for students with an interest in the problem solving techniques used in criminal investigations. In this course students investigate a case, apply the principles of forensic science and learn specific laboratory techniques used in analyzing physical evidence. Students have the opportunity to apply a variety of skills from various academic fields including work in photography, visual arts, psychology, medicine as well as the pure sciences, chemistry, physics and biology. A case study and laboratory skills commensurate with basic forensic science procedures performed weekly as they apply to the particular case or unit being studied including experiences in analyzing fingerprints, DNA, blood, impressions, and hair and other physical evidences.

Marine Biology

ID: 44021 Grade: 11-12 Length: Semester

Credit: Life Science

Prerequisite: Open to 10th graders concurrently enrolled in Chem or Acc Chem

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.

Anatomy and Physiology

ID: 44010 Grade: 11-12 Length: Semester

Credit: Life Science

Prerequisite: A Chemistry course

This course is designed for students interested in learning the important principles behind exercise and immunology. The first half of the course focuses on the form and function of musculoskeletal system. Students will be asked to challenge their bodies with varied activities such as the Wingate, reflex, muscular strength and modified VO₂ max tests to further understand how their body responds to applied stresses. The second half of the course focuses on the immune system and infectious diseases. By understanding the layers of defense our bodies utilize and the extraordinary methods at which invading pathogens try to avoid our immune system, students will gain an appreciation of the complex interaction between our body and the environment. Through the two lenses of exercise physiology and infectious diseases, the contributions of many of the other body systems, such as the cardiovascular, nervous, endocrine, lymphatic, respiratory, digestive and urinary systems towards maintaining homeostasis of the human body can be examined. Although a challenging course, there is a lot of practical knowledge to be gained by studying these body systems that will help students appreciate how their body responds to applied stresses.

Zoology

ID: 44013 Grade: 11-12 Length: Semester

Credit: Life Science

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 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.

AT Tropical Ecology/AP Environmental Science

ID: 44035 Grade: 11-12 Length: Year

Credit: Life Science

Prerequisite: B+ or higher in Biology or a B or better in Molecular Biology and a B or higher in Semester 1 Chemistry

This is a college level course integrating the study of ecology and environmental science. In addition to the fundamental concepts of ecology, students will study, analyze and evaluate a wide range of environmental issues both natural and human-made, making connections between science, technology and society, and solutions for resolving and/or preventing environmental problems. Topics will include: sustainability, the structure and function of ecosystems, population dynamics, climate, water, mineral and soil resources, waste reduction and prevention, global food resources, biodiversity, energy resources, and environmental economics and politics. Tropical ecology investigations will include both lab and fieldwork in regional Southeast Asia ecosystems including mangroves, rocky shore and sandy beach, coral reefs, primary and secondary rainforests, and human impacted systems such as, plantation agriculture, urban systems. Local environmental monitoring will include physicochemical sampling and analysis of water, soil and air quality, plant and animal population dynamics and biodiversity to determine relative ecosystem integrity. Students will be prepared to take the College Board AP Environmental Science exam. The AT Tropical Ecology portion of this course was collaboratively developed and endorsed by Dr. Michiel Van Breugel, Tropical Ecologist, Yale-NUS College in 2016. 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 a grade point weighting of 0.5.

AP Biology

ID: 44027 Grade: 11-12 Length: Year

Credit: Life Science

Prerequisite: Semester I grade of B or higher in Accelerated Chemistry or B+ or higher in Chemistry.

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.

PHYSICAL SCIENCES

Physical Science

ID: 44006 Grade: 10-12 Length: Year

Credit: Physical Science

Prerequisite: Completion of Biology

This course will provide students with a fundamental knowledge of physical science while developing an understanding of their importance to society. Essential concepts of chemistry and physics are introduced in an engaging inquiry approach; without emphasizing applications involving math. The course is a broad-based course integrating, among other topics, health science, technology applications, earth science, and global issues; with the common thread being physical science. The course stresses analytical skills that are vital for any student to be successful in science; ultimately placing responsibility for learning on students themselves as they explore individually and in groups how physical science concepts apply to their everyday lives. In addition to traditional laboratory work, students will be involved in a variety of technology centered decision-making activities and projects.

Chemistry

ID: 44014 Grade: 10-12 Length: Year

Credit: Physical Science

Prerequisite: A Biology course or Physical Science, plus completion of Algebra I or a higher level math course

This course presents the most current theoretical viewpoints of chemistry in correlation with proper scientific methods and techniques. Qualitative and quantitative analysis are a part of most classroom

discussions, and technology-integrated studies provide many hands-on opportunities to reinforce the topics covered. The first semester covers analytical fundamentals, atomic and molecular structure, nomenclature, chemical processes and composition, and quantitative chemistry while continually reinforcing scientific problem-solving methodologies. The second semester builds on these concepts while introducing chemical bonding and structure, the kinetics of phases of matter, colligative properties of solutions, electrolytes, oxidation-reduction relationships, radioactivity, and some organic chemistry. The nature of scientific knowledge, inquiry, and its enterprise will be integrated into authentic labs and other activities throughout the year.

Accelerated Chemistry

ID: 44023 Grade: 10-12 Length: Year

Credit: Physical Science

Prerequisite: Semester I grade of B+ or higher in Biology or a B or better in Molecular Biology plus completion of a Geometry or higher level math course

Accelerated Chemistry is an introductory chemistry course designed for above-average students, in particular those who intend to pursue further science courses leading to a science-related career. It is a rigorous course in which students are expected to be able to read and comprehend technical material at or above grade level. The course presents contemporary ideas of chemistry based heavily on laboratory experiences done by both traditional methods and by the use of laptop-based probeware. Energy and the development of the quantum mechanical model of the atom serve as basic themes for the study of the states of and interaction of matter. Stoichiometry, periodicity, chemical bonding and molecular geometry, chemical thermodynamics, chemical kinetics, equilibrium, and quantum mechanics are all examined. On transcripts, this course is designated as being equivalent to an honors course.

AP Chemistry

ID: 44031 Grade: 11-12 Length: Year

Credit: Physical Science

Prerequisite: Semester I grade of B or higher in Accelerated Chemistry or A or higher in Chemistry, plus completion of Algebra II/Trig or higher math course

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 are expected to sit for the AP exam.

Physics

ID: 44015 Grade: 10-12 Length: Year

Credit: Physical Science

Prerequisite: Algebra II or higher math course

The Physics course is a math-oriented, problem-solving, laboratory-based approach to physics. It is designed for the student who intends to pursue further science courses. Through laboratory experiences and problem-solving activities, this course will treat each major area of physics in some detail, including mechanics, waves and light, electricity and magnetism, and some modern physics. Students will use creative problem solving and technology to gather, analyze, and present data and conclusions about the physical world around them.

Earth Science

ID: 44009 Grade: 10-12 Length: Semester

Credit: Physical Science

Prerequisite: To request this course as a 10th grader, concurrent enrollment in Physical Science or a Chemistry course is required.

Note: Not offered in 2016-17

Earth science is the study of many interesting and interrelated subjects within the field of science. These subjects include but are not limited to the study of earth's interior, its rocks and soils, its atmosphere, its oceans, and the Earth's relation to our celestial neighbors. The study of earth science deals with many fascinating yet practical questions regarding our dynamic planet's history and possible future. What forces produce earthquakes? Why do volcanoes erupt? What drives our weather patterns? Where do waves come from? The course begins with the creation of the earth and takes students on a tour of the process and forces that shape our

planet; from volcanoes and earthquakes to wind, weather, and waves, this course offers something for everyone. The focus of the course is helping students connect the different parts of the earth - its oceans, atmosphere, rocks, soil, and living things - to their own lives and frequently involves current events and the use of technology when appropriate.

Engineering Science

See entry in TEC section

AP Physics 1

ID: 44032 Grade: 11-12 Length: Year
Credit: Physical Science

Prerequisite: Semester I grade of A in Algebra II or completion of Algebra II/Trig or higher level math course. Also requires a Semester I grade of B or higher in either Physics or Accelerated Chemistry or a B+ or higher in Chemistry.

AP Physics 1 is an introductory algebra-based physics course that gives students an exposure to Newton's laws (kinematics, dynamics, uniform circular motion, gravity, rotation, oscillations), conservation laws (momentum, energy, work), mechanical waves (traveling waves, sound), electrostatics and electric circuits. Additionally the course will include further topics such as electromagnetism to better prepare students who plan on taking AP Physics C in the following year. There will more time for hands-on explorations of physics content and inquiry labs. Investigations will require students to ask questions, make observations and predictions, design experiments, analyze data, and construct arguments in a collaborative setting. 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.

AP Physics 2

ID: 44033 Grade: 11-12 Length: Year
Credit: Physical Science

Prerequisite: Semester I grade of A in regular Physics

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 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.

AP Physics C

ID: 44030 Grade: 11-12 Length: Year
Credit: Physical Science

Prerequisite: Semester I grade of at least a B in AP Physics 1 or B+ in Physics, plus completion or concurrent enrollment in AP Calculus AB

AP Physics C is a rigorous calculus-based physics course for those students planning on higher studies in science or engineering. It is equivalent to an introductory college-level physics course for science majors. The first semester covers the following topics in Newtonian mechanics: the laws of motion, energy, momentum, oscillations and gravitation. Topics in the second semester include electricity and magnetism: electrostatics (including Gauss's Law), electric circuits, magnetostatics (including Ampere's Law) and electromagnetism (including Faraday's Law) and Maxwell's equations. Students who are successful in this course are prepared to sit for both portions of the AP Physics C examination.

WORLD LANGUAGES

The SAS World Language program offers instruction in four different languages: Chinese (Mandarin, taught using simplified Chinese characters), French, Spanish, and Japanese*. In alignment with our K-12 program philosophy, we believe that the primary purpose of learning another language is to develop the ability to communicate effectively in real-life contexts. The goal of the World Language program, therefore, 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, beyond what they know about the language. Courses are taught in the target language beginning in all our Novice courses.

Interpersonal listening and speaking skills are a key component of our program and are the primary focus in our Novice and Intermediate courses, as these are the skills that are most important in the first stages of learning a language. In the Intermediate High and Advanced courses, while students continue to develop their interpersonal listening and speaking skills, increasing attention is given to the development and assessment of the interpretive skills (listening and reading), as well as presentational communication (speaking and writing).

Course names and design refer to the proficiency level being targeted by the end of each course (year-long or multi-year). It is necessary for students to reach the performance benchmarks before advancing to the next level because, as their language ability develops, their needs change, and, as such, instructional focus changes. The multi-year courses (e.g., Intermediate, Intermediate High) are designed to allow students to take the time they need to build greater confidence and consistency in their language abilities, while they experience new culturally-rich thematic units over a period of two to three years. Research and past practice have shown this to be the amount of time commonly required in order to achieve the performance targets indicated.

Students who have learned one of the four languages offered at SAS at home or as a second language in a target-language country will be assessed and may be advised to maintain the language on their own.

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 an Intermediate-Mid level of proficiency. This level is generally acquired in 3-4 years of language study.

*2016-17 will be the final year of the Japanese language program

SPANISH, FRENCH AND CHINESE

NOVICE

This year-long course is for students who have little or no experience with the language. It provides them with the necessary skills to understand and create meaningful communication from early on in a supportive and rich environment. This course focuses on the development of listening and speaking through interpersonal communication, and 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 recombinations of these, as well as respond to simple, direct questions or request for information.

The skills of writing, 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.

Novice Courses

ID: 45040	Spanish: Novice
ID: 45050	French: Novice
ID: 45060	Chinese: Novice

Grade: 9-12 Length: Year Credit: Language

INTERMEDIATE

This multi-year course is for students who have reached at least a Novice High 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 skills of writing*, 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 proficiency target.

*Intermediate Chinese courses will also include development and assessment of presentational speaking skills

All Intermediate courses require a recommendation from the student's current language teacher. Students who are new to SAS will be assessed upon their arrival.

Intermediate Courses

- ID: 45041 *Spanish: Intermediate*
- ID: 45042 *Spanish: Intermediate II*
- ID: 45043 *Spanish: Intermediate III*

- ID: 45051 *French: Intermediate*
- ID: 45052 *French: Intermediate II*
- ID: 45053 *French: Intermediate III*

- ID: 45061 *Chinese: Intermediate*
- ID: 45062 *Chinese: Intermediate II*
- ID: 45063 *Chinese: Intermediate III*

Grade: 9-12 Length: Year Credit: Language

INTERMEDIATE HIGH

This multi-year course is for students who have reached an Intermediate Mid level of performance in interpersonal listening and speaking.

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. While this course continues to emphasize interpersonal listening and speaking, interpretive listening and reading, and presentational writing*, are more formally developed and assessed. 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 (current events/ issues, matters of public and community interest), and to resolve problems they might encounter in their daily lives. They aim to narrate and describe in three major time frames - present, past, and future - and mostly in connected paragraphs. This performance target is most commonly achieved over a period of two to three years.

*Intermediate High Chinese courses will also include development and assessment of presentational speaking skills

All Intermediate High courses require a recommendation from the student's current language teacher. Students who are new to SAS will be assessed upon their arrival.

Intermediate High Courses

- ID: 45044 *Spanish: Intermediate High*
- ID: 45045 *Spanish: Intermediate High II*
- ID: 45046 *Spanish: Intermediate High III*

- D: 45054 *French: Intermediate High*
- ID: 45055 *French: Intermediate High II*
- ID: 45056 *French: Intermediate High III*

- ID: 45064 *Chinese: Intermediate High*
- ID: 45065 *Chinese: Intermediate High II*
- ID: 45066 *Chinese: Intermediate High III*

Grade: 9-12 Length: Year Credit: Language

ADVANCED

Advanced-level French or Spanish courses are for students who have reached at least at an Intermediate High performance level in interpersonal listening and speaking, interpretive listening and reading, and presentational writing. They 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). These courses focus on all modes of communication - interpersonal, presentational and interpretive - and the performance target is at least Advanced Low for each.

Advanced Low 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 of paragraph length and structure.

All Advanced courses require a recommendation from the student's current language teacher. Students who are new to SAS will be assessed upon their arrival.

Spanish: Advanced

ID: 45047 Grade: 9-12 Length: Year
Credit: Language

Advanced Spanish is a one-year advanced-level course offered as an alternative to AP Spanish Language and Culture, or as an opportunity to further develop language skills before or after the AP course. This course will continue to focus on spoken and written expression, including presentational speaking, while developing higher-level comprehension skills through culturally rich thematic units. It will also allow students to gain a deeper understanding and appreciation of Hispanic language and culture (products, practices and perspectives).

French: Advanced

ID: 45057 Grade: 9-12 Length: Year
Credit: Language
Prerequisite: Teacher recommendation

Advanced French is a one-year advanced-level course offered as an alternative to AP French

Language and Culture, or as an opportunity to further develop language skills before or after the AP course. This course will continue to focus on spoken and written expression, including presentational speaking, while developing higher-level comprehension skills through culturally rich thematic units. It will also allow students to gain a deeper understanding and appreciation of Francophone language and culture (products, practices and perspectives).

ADVANCED OPTIONS (AP AND AT)

AP Spanish Language and Culture

ID: 45024 Grade: 10-12 Length: Year
Credit: Language
Prerequisite: Teacher recommendation

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.

AP French Language and Culture

ID: 45023 Grade: 10-12 Length: Year
Credit: Language
Prerequisite: Teacher recommendation

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 Francophone 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.

AP Chinese Language and Culture

ID: 45025 Grade: 10-12 Length: Year

Credit: Language

Prerequisite: Teacher recommendation

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.

AT Chinese Language: History

ID: 45029 Grade: 11-12 Length: Year

Credit: Language

Prerequisite: Minimum Chinese language proficiency level of Advanced-Low across all four skills or successful completion of AP Chinese or teacher recommendation.

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, analyzing, 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. The course will include an extended essay and oral presentation based on their research to demonstrate the final learning outcomes. The course was collaboratively developed and endorsed by Dr. Tao Jian Min, professor at East China Normal University in Shanghai, China in 2016. The course requires rigorous study and emphasizes in-depth research. 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 a grade point weighting of 0.5.

HERITAGE LEVEL CHINESE**Chinese Language: Near Native I**

ID: 45027 Grade: 9 Length: Year

Credit: Language

Prerequisite: Assessment or teacher recommendation

This course is designed for students who have been learning Chinese as near-native learners. It provides an opportunity for students to continue developing the ability to communicate naturally, systematically and logically in the Chinese language with a strong emphasis on developing literacy skills and a deeper understanding of the subtlety of the Chinese culture revealed in the language. Authentic materials will be used for analysis and application in real life situations.

Chinese Language: AP-Near Native II

ID: 45028 Grade: 10-12 Length: Year

Credit: Language

Prerequisite: Semester I grade of B or higher in Near Native I or teacher assessment/recommendation

This course is a continuation of the concepts learned in Near Native I and is designed for students who have been learning Chinese as near-native learners. Students will further develop their ability to naturally communicate in the Chinese language with an emphasis on developing reading and writing skills. Authentic materials will be used for analysis and application in real life situations. Students will also gain a much deeper understanding of both contemporary and historical Chinese culture. This rigorous course is identified being equivalent to an honors level course on transcripts.

JAPANESE

Please note that the SAS Japanese program is being phased out. The final year of Japanese instruction will be 2016-17. Provided there is sufficient enrollment, only level IV will be offered.

Japanese IV

ID: 45020 Grade: 9-12 Length: Year

Credit: Language

Prerequisite: Japanese III Semester I grade of C or higher

Students entering Japanese IV should already be able to comprehend written and spoken Japanese and should be able to speak and write Japanese within the context of more complex sentence structures that will include relative

pronouns and more complex conjunctions of time, consequence, condition using the present, future, past tenses, and conditional tenses and expressions. They should be familiar with 250 to 300 Chinese characters. Students should also be able to comprehend and formulate more complex interrogative expressions.

TECHNOLOGY, ELECTIVES AND CAPSTONE (TEC)

TEC courses prepare students for the real world. Students will develop critical thinking skills, often utilizing hands on, project based experiences in these courses. They will have opportunities to explore their own interests, while blending core academic course knowledge and applications with authentic, creative demands. Please check the grade level requirements for each course. Some are only open to students in certain grades or those who have met specific prerequisites.

Beginning with the SAS Class of 2018, all students must complete the SAS Catalyst Project as a requirement for graduation.

FINANCE/TECH/ENGINEERING/ROBOTICS

Computer Science I

ID: 44518 Grade: 9-12 Length: Semester
Credit: Elective

Prerequisite: Completion of Algebra 1. Ninth graders need approval of their Math 8+ math teacher.

This course provides an introduction to coding and computer science principles. Students will use Java and computational thinking strategies to design, write, and test programs. Java supports object-oriented programming (OOP), common to all high-level programming languages and is the language of instruction for AP Computer Science A. This hands on course will give students the opportunity to appreciate and understand the depth at which businesses, engineering, and our daily interactions are dependent on computer science. Students learn by carefully designing a solution (algorithm) to problems, programming, and testing/debugging. Examples of programming applications to be reviewed include financial, probability, simulations of payrolls, simulations of trip planning, games, and many math problems. This course is designed as an exciting and unintimidating jumping off point for those who want to understand what coding is and how it relates to the technological world in which we live. No prior knowledge of Java or programming is required. Successful completion of the course will fulfill the prerequisite for AP Computer Science.

Emerging Technologies

ID: 44501 Grade: 9-11 Length: Sem or Year
Credit: Elective

This semester long survey course gives primarily underclassmen a view into design, digital fabrication, coding and graphics at an entry level. Students explore a wide range of fundamental hands-on skills including digital sketching, fabrication using the laser cutter and 3D printer, basic app development and the interconnection of computing devices. The course is deliberately broad, spanning many of the design and technology courses currently taught at SAS, and for this reason is a good entry point into more specialized courses offered at the junior and senior level. This course is a recommended springboard for younger, self-motivated students who have an interest in learning through discovery and working in teams while solving reality-based problems through design thinking. Students build on this course to later study 2D and 3D Graphics, Robotics and Game Development. 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.

Introduction to Robotics

ID: 46520 Grade: 9-12 Length: Semester
Credit: Elective

In this course students will learn new skills and apply critical thinking to solving concrete problems. Important learning goals of the course are innovation, perseverance, teamwork and communication. The course is divided into three main segments: 1) Code Academy is used to walk students with no experience through basic coding laws and language, using the Python language. 2) Arduinos 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. 3) Tetrax robots are approximately one cubic foot in size and are used in two in-class competitions - Bomb Squad and Ken and Barbie Firefighter rescue. Students design, build and drive robots to perform these real-world tasks. A technical poster, technical paper and interviews with outside engineers are required as well.

Robotics Science

ID: 46522 Grade: 9-12 Length: Sem or Year
Credit: Elective

Prerequisite: Intro to Robotics, Emerging Technologies (or concurrent request) or an MS/HS TEC teacher recommendation

This collaboratively taught course teaches and applies learning in the areas of mechanics, electronics, CAD, robotics design, writing, art and marketing. Students meet, network and compete with local and international high schools and universities, at competitions including VEX robotics in Taipei, FRC robotics in Sydney, and MATE robotics in Hong Kong. These three competitions are “the gold standard” of STEM, and membership on a robotics team provides excellent preparation for students headed to careers in engineering, marketing or science. Successful students are those who excel at teamwork, innovation and perseverance. Students can take this course for one semester or the entire year and it may be repeated for credit. Those who have previously taken the course are expected to assume leadership roles and mentor new students. Community service may include mentoring SAS robotics teams in the lower schools. Travel to out-of-country competition is optional, and is the financial responsibility of the student.

Personal Finance: You and Your Money

ID: 46531 Grade: 10-12 Length: Semester
Credit: Elective

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, blog about their learning, and explore the merits of careful consumption and effective investing through a series of project-based discoveries.

Graphic Design

ID: 44527 Grade: 10-12 Length: Semester
Credit: Elective

Prerequisite: Emerging Technologies.

Graphic design is a part of daily life. From humble things like gum wrappers to huge things like billboards to the T-shirt people wear, graphic

design is used to convey a message from a client to an audience. In this course students will learn how to use graphic design to inform, persuade and attract attention by creating and organizing the elements of typography, images, and the so called “white space” around them. Students will complete a variety of authentic projects that includes but is not limited to the design of posters and brochures. They will gain a solid foundation in the use of Adobe Illustrator, Photoshop and InDesign. This course is a complement to the Newspaper and Yearbook courses.

3D Graphics and Animation

ID: 44525 Grade: 10-12 Length: Semester
Credit: Elective

Prerequisite: Emerging Technologies

This course is designed for students with an interest in computer-generated imagery (CGI). As a foundation course, this course must be completed before advancing to other CGI courses. Students will learn the basic concepts behind animation and 3D development using an industrial standard 3D application such as Maya. The course will cover the basic methods of creating objects and characters in three-dimensional space. Students will also learn shading, texturing, rendering, and the use of dynamics to make creations appear realistic. A copy of Maya Personal Learning Edition will be provided to students so they can practice skills outside of class.

Digital Game Development

ID: 44517 Grade: 10-12 Length: Semester
Credit: Elective

Prerequisite: Emerging Technologies

Games have been around for a very long time (consider the game Senet played by the ancient Egyptians). Games were used as ways to develop physical skills (consider throwing objects at targets) or training to develop military strategies (chess?) or to simply kill time while waiting for the crops to grow. Of course, creating games, and especially video games, requires more than just an idea of something that would be fun. Designers have to understand the mechanics of games, test the balance of the rules to ensure that all players have an equal opportunity to win, communicate how the game is played, and create the environment that will be used to play the game - whether a board game with dice or a computer. This course will cover the basic game development process, from design process through to playable digital and non-digital games. This will include study of game design mechanics and principles of

the game design process (e.g., play balancing, testing), basic computer programming concepts, and concepts and production processes of game related art, including background design, character design, and user interface design. Students will gain a very good sense of the game development process and the various creative and technical aspects involved.

Engineering Science: Design, Build, & Transform

*ID: 44012 Grade: 10-12 Length: Year
Credit: Elective*

In this class students assume the role of designers and learn to apply the design process to an increasingly difficult series of challenges. Collaboratively taught, this class will interest students wanting the opportunity to learn by tackling real problems within fields of study such as sustainable housing, transportation, community infrastructure and energy. Students approach learning through creative problem solving and activities that retain a sense of playful exploration. Semester one includes a deep dive into the design process; prototyping and computer aided design (Sketchup) as well as exploratory work with tools such as Lego, Rube Goldbergs, folding techniques and 3D printing. Activities will strengthen basic skills in fabrication, collaboration, project management and underlying scientific concepts. In the second semester student teams will be given guidance and opportunities to apply their skills to an authentic challenge and will work collaboratively to realize a solution of sufficient scale and complexity.

Structural Engineering: Fusing Art and Architecture

*ID: 46552 Grade: 11-12 Length: Semester
Credit: Elective*

Are you interested in Architecture? Are you an aspiring furniture designer? In this semester-long class, students will become designers and fabricators to produce unique, inventive solutions to design challenges. Assisted by instructors and community experts, students will be challenged to use all the skills of the design cycle, from identifying specific needs to prototyping in order to complete their project. Mini lessons throughout will strengthen skills in fabrication (wood and metal work), collaboration and project management.

AP Computer Science

*ID: 44521 Grade: 10-12 Length: Year
Credit: Elective*

Prerequisite: Semester I grade of B or higher in Algebra II/Trig or a higher level math course. In exceptional cases, concurrent enrollment in Algebra II/Trig or Accelerated Math is possible with AP Computer Science teacher permission.

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. There is no prerequisite of knowledge or skill in programming although logic, math, and linguistic 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, and object orient programming. 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 yearlong course is identical to a first semester programming course taught at most universities; therefore, students are expected to commit to a daily schedule of programming and studying activities.

JOURNALISM AND MEDIA

Video Journalism

*ID: 46403 Grade: 9-12 Length: Semester
Credit: Elective*

The emphasis of this course is the craft of electronic newsgathering in an age that sees a shift in viewership from traditional, broadcast television news to websites that are now a principal source of information for most. Students will produce content for the high school's Morning Show, but also for the high school's online newspaper, *The Eye*. Practical exercises and projects will demonstrate the students' mastery of the techniques and skills required for the production of news and public affairs programs. Students will study and practice the interview, research and writing skills common to all journalists, and will add to those skills the production skills required in this craft: sound and video recording, editing and studio production. Students will be required to complete some work outside of regularly scheduled class meetings.

Journalism: Newspaper

ID: 46400 Grade: 10-12 Length: Year
Credit: Elective

This is a project-based course offering exposure to all of the practices, skills and tools used in contemporary print and online journalism. Students will learn how to interview, report, write and edit as well as learning about the operation of a contemporary online newspaper: ethical practices, organization, editorial policy, production and design. Output may be in the form of written stories, video stories (news packages) or even documentaries. All will learn the multiple skills of the contemporary journalist. The traditional print reporter might have to learn to introduce their written post with a short stand-up video, a short interview with a principal source, or a voice-over with taped images of the event. The broadcast reporter will learn how to write three-paragraph introductions to news packages or video montage and to add written content that explores details that the news package cannot with its time limitations. Students will participate in the daily, live production of the high school's Morning Show, whether writing copy, producing promotional videos, working on the production crew or hosting. There will be an attempt to schedule free periods consecutive to this class and students will use a combination of class time and free periods for mandatory staff meetings, small 'tools and skills' sessions, and one-on-one sessions with the adviser. Students must be able to work independently on stories and projects. The course may be repeated for credit.

Journalism: Yearbook

ID: 46401 Grade: 9-12 Length: Year
Credit: Elective

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.

AP CAPSTONE, ONLINE, INDEPENDENT & CATALYST

AP Seminar

ID: 48511 Grade: 10-11 Length: Year
Credit: Elective

Prerequisite: For rising sophomores a Semester I grade of A in both English 9 and World History or World Studies is required. For rising juniors, a Semester I grade of B+ or higher in English 10 or American Studies

This foundational skills based course provides opportunities to think critically and creatively, research, explore, pose solutions, develop arguments, collaborate, and communicate using various media. Students explore current real world issues through a cross curricular interdisciplinary lens, consider multiple points of view to develop deep understanding of complex issues, and connect these issues to their own lives. Topics may include, yet are not limited to, beauty, public opinion, sustainability, liberty, myth, and power. Upon completion of the AP Seminar, students will be prepared for a research, performance, or innovation AP Research experience the following academic year.

AP Research

ID: 48512 Grade: 11-12 Length: Year
Credit: Elective

Prerequisite: Success in AP Capstone Seminar

In this course, students will work on an independent research project on a topic of interest. For example, students can dig deeper into a topic studied in an AP course, work across academic areas on an interdisciplinary topic or study a new area of interest, perhaps one a student would like to study in college. At the end of the research project students will submit an academic paper of about 5,000 words and defend the work through a presentation. To earn the AP Capstone Diploma, students must earn scores of 3 or higher on the AP Seminar and AP Research Exams and on four additional AP Exams.

GOA Online Learning

ID: 49600 (S1) and/or ID: 49601 (S2)

Grade: 11-12 Length: Semester I and/or Sem II

Credit: Elective

Prerequisite: Students must meet and have their learning plan approved by the SAS GOA Site Director

SAS is a member of the Global Online Academy (GOA), a consortium of the top independent schools from around the world. As a member of GOA, SAS students can enroll in courses as diverse as The Graphic Novel or Medical Problem Solving. Working closely with peers and teachers from the U.S. and other international schools, SAS students have an exciting and flexible online learning opportunity that will challenge them to further develop cultural competence and global citizenship skills.

Students who would like specialized learning options beyond SAS's in-house course offerings may choose to enroll in a one semester or year-long online course through GOA's broad and rigorous selection of online courses. If this sounds interesting, take a look at the online course catalog options that can be found on the www.globalonlineacademy.org website and then speak with your counselor.

Students who would like to take a GOA course should select the "GOA Online Course" option during the SAS online course request process in April. Once a GOA course is selected, the student is committed to completing the course, so it is important that there be careful consideration. 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 many GOA courses, and students may be expected to manage collaboration and communication across time zones. The SAS GOA Site Director, Mr. Patrick Green, will contact students to assist them through the process of signing up for a specific course through GOA.

Students in grades 11 and 12 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 or passions and goes beyond the options available at SAS. A GOA course must be a course that is not already offered at SAS. Credits earned through GOA could be used to

fulfill minimum number of SAS credits required for graduation, but would not fulfill department specific minimum requirements.

The GOA transcript will become a part of the student's official academic record. To earn a credit, the course must be completed prior to the final day of the semester; otherwise the course will be listed as an F. On the SAS transcript, the course will be listed as "GOA Online Course" with a P (pass) grade and 0.5 credit per semester. The grade would not be included in the calculation of an SAS grade point average (GPA). The GOA transcript, including the actual grades, would be sent to colleges as an additional page of the SAS transcript.

While students are encouraged to enhance their learning through other online learning opportunities and report details on university applications, only GOA courses will be listed on the SAS transcript.

Independent Learning

ID: 49013 Grade: 11-12 Length: Semester

Credit: Elective

Prerequisite: Students will be required to provide additional information and have their learning plan approved after the course selection process ends.

The Independent Learning option is designed so that students can study a topic or learn in an area in which no course is available or for students to pursue work experience programs like internships, externships, or employment that is supervised by SAS. Rising juniors and seniors should select the six traditional SAS classes, with the independent course as a seventh course. For the independent learning option to be listed on the SAS transcript, it must be reviewed and approved by the Center for Innovation Coordinator, Dennis Steigerwald, by the start of the semester and must be completed by the end of the semester. Successful completion would provide one-half credit per semester and be listed on the transcript as a P (Pass). The course would not be included in the SAS GPA. In order to ensure that students benefit from the full academic program offered at SAS, an independent activity could not be used to fulfill the SAS subject area graduation requirements. Further information about independent learning options is available from the Coordinator of the Center for Innovation.

The SAS Catalyst Project

ID: 48510 Grade: 11-12 Length: Semester

Credit: Required beginning with the Class of 2018

Prerequisite: 11th grade students must have approval from their counselor or Mr. Steigerwald in the Center for Innovation

The SAS Catalyst Project represents the culmination of academic, intellectual, and social-emotional learning experiences where students are provided guidance, resources, and flexible scheduling to explore interests and pursue passions. Teachers act as “guides on the side” for students where learning is differentiated for each student based on their interest, readiness, and learning profile. The Desired Student Learning Outcomes (DSL0s) of communication, collaboration, critical thinking, and creativity) are emphasized, developed, and assessed. As students design, plan, and conduct their projects, they will focus on producing a tangible outcome and encouraged to 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, etc.). 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. Juniors who have a strong interest in a particular project and are self directed may complete the Catalyst Project as a junior. This would be especially true for students who are planning a heavier senior course load or are applying to a university requiring a demonstration of understanding in a particular academic area (e.g., UK universities).

VISUAL & PERFORMING ARTS

Singapore American School offers a number of options in the visual and performing 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.

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. So that performing ensembles can best meet the needs of all students, some courses require an audition prior to enrollment.

VISUAL ARTS

Art I: Foundations

*ID: 46100 Grade: 9-12 Length: Semester
Credit: Visual/Performing Arts*

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, clay, 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 Grade: 9-12 Length: Semester
Credit: Visual/Performing Arts*

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. A brief introduction to the potter's wheel 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 Grade: 10-12 Length: Semester
Credit: Visual/Performing Arts
Prerequisite: Ceramics I*

This class builds on the skills acquired in the Ceramics I class. Students will work towards further mastering basic hand building and may choose to learn wheel throwing techniques on the potter's wheel. A focus on modern ceramic art as it exists today will be the focus of cultural investigation. Students will be given design problems to solve using skills and innovation for developing self-expression. They are responsible for maintaining the ceramic supplies needed and for managing the clay process from construction through glazing.

Printmaking & Mixed Media

*ID: 46110 Grade: 9-12 Length: Semester
Credit: Visual/Performing Arts*

This course is for students who enjoy hands-on work and who would like to develop their printmaking skills as a base to their artwork. Students will explore many different types of printmaking, including screen printing, intaglio, linoleum, and collagraphs. Students will also explore the integration of drawing and painting techniques with printmaking to create mixed media work. The emphasis of this course is to use the elements and principles of art and design in contemporary printmaking techniques.

Studio Art

*ID: 46106 Grade: 10-12 Length: Year
Credit: Visual/Performing Arts
Prerequisite: Art Foundations or acceptable portfolio*

In this course students are provided with the opportunity to further develop their artistic abilities and interests within a variety of areas: drawing, painting, design, illustration, and mixed media. They find and build upon their strengths in a variety of media within each assignment.

Students are exposed to a broad spectrum of art styles allowing each student to find and develop their particular area or areas of interest. Students work to achieve higher levels of proficiency in art.

AP Studio Art: Drawing

ID: 46111 Grade: 10-12 Length: Year

Credit: Visual/Performing Arts

Prerequisite: Studio Art

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, videotapes, digital imaging, photocopies of work, and three-dimensional work may not be submitted for the Drawing Portfolio.

AP Studio Art: 2D Design

ID: 46112 Grade: 11-12 Length: Year

Credit: Visual/Performing Arts

Prerequisite: Studio Art or Digital Photography (or concurrent enrollment) or acceptable portfolio

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.

AP Studio Art: 3D Design

ID: 46113 Grade: 11-12 Length: Year

Credit: Visual/Performing Arts

Prerequisite: Studio Art or concurrent enrollment

This portfolio is intended to address sculptural issues. Design involves purposeful decision-

making about using the elements and principals 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.

THEATER

Stagecraft

ID: 46544 Grade: 9-12 Length: Semester

Credit: Visual/Performing Arts

Stagecraft covers the technical aspects of theater productions. Student assignments and projects will involve three topic areas: set design and construction, stage lighting, and theater sound systems. 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.

Theater: Foundations

ID: 46307 Grade: 9-12 Length: Semester

Credit: Visual/Performing Arts

The ensemble is the foundation supporting all our work in theater. Students engage in wide variety of ensemble games throughout the semester. Students develop basic acting skills through scene work and acting exercises. Actor training focuses on realism, which has as its goal 'truthful behavior under imaginary circumstances.'

Theater: Improvisation

ID: 46310 Grade: 9-12 Length: Semester

Credit: Visual/Performing Arts

Contrary to popular belief, Improv 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 games in a workshop process emphasizing collaboration and play.

Theater: Advanced Improvisation

ID: 46314 Grade: 10-12 Length: Semester
 Credit: Visual/Performing Arts
 Prerequisite: Theater: Improvisation

Building on skills learned in Improv, students will work towards a 'Long Form' performance. The ensemble improvises a 20-30 minute set based on a single prompt from the audience. Long form relies more heavily on acting skills, ensemble memory and active listening than short forms. Long form ensembles represent the 'cutting edge' in today's Improv subculture. This course can be repeated for credit.

Theater: Production

ID: 46313 Grade: 10-12 Length: Semester
 Credit: Visual/Performing Arts
 Prerequisite: Any Theater course

Students work in small and full-class ensembles rehearsing and performing theater for a public audience. As this course is designed to empower students as 'theater-makers', there is a prerequisite of at least one other theater course. Some after school rehearsals will be required. This course can be repeated for credit.

Film/Acting Ensemble

ID: 46315 Grade: 10-12 Length: Semester
 Credit: Visual/Performing Arts
 Prerequisite: Any Theater or Filmmaking course

In this course, students form a collaborative ensemble to create a short film to be entered in film contests. Students will focus on either the performance or the technical aspects of filmmaking. The entire class will work together on creating story and dialogue, choosing locations and a variety of other aspects of creating a short film.

Musical Theater: History & Production

See entry in Music Exploratory Wheel section

FILM AND PHOTOGRAPHY**Filmmaking**

ID: 46404 Grade: 10-12 Length: Semester
 Credit: Visual/Performing Arts

The emphasis in this course is the art and craft of filmmaking as students study and practice the single-camera style used by filmmakers in

the production of features and documentaries. Assignments will include readings on film aesthetics and practices and the study of critically acclaimed, early and contemporary films. Practical, hands-on work includes a camera familiarization exercise, a digital-editing exercise, two structured exercises and a final project. Students will write a treatment and script, and prepare a storyboard for the final project. Students will be required to complete work outside of regularly scheduled class meetings. This course may be repeated for credit.

Advanced Filmmaking

ID: 46406 Grade: 10-12 Length: Semester
 Credit: Visual/Performing Arts
 Prerequisite: Filmmaking

Students take the skills and experience gained in Filmmaking and work independently to create short films for entry in film festivals. This course may be repeated for credit.

Digital Photography

ID: 46519 Grade: 10-12 Length: Semester
 Credit: Visual/Performing Arts
 Prerequisite: A digital camera

This course will introduce students to the limitless possibilities of image making in the digital age. Students will be expected to learn the fundamental concepts and skills related to digital photography and graphic design. This is a project-based course that will require students to integrate the concepts of art and design into a series of assignments that they will create on the computer using Adobe Photoshop software. Students will also learn to use digital cameras, and scanners as image input devices and laser and color ink jet printers as output devices. Topics will include: digital vs. traditional photography, basic digital image adjustment, advanced digital image manipulation, type and text, composite and photomontage, methods of printing and presentation of digital images. Students will be required to submit prints for exhibition as well as prepare and present a final portfolio of their work at the end of the semester.

Advanced Digital Photography

ID: 46521 Grade: 10-12 Length: Semester
 Credit: Visual/Performing Arts
 Prerequisite: Digital Photography and access to a digital camera, preferably a DSLR

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. Students will be expected to design a final creative project in a direction and area of their interest. Throughout the course, students will be required to submit prints for exhibition as well as prepare and present a multimedia final portfolio of their work at the end of the semester.

INSTRUMENTAL MUSIC

Concert Band

ID: 46202 Grade: 9-12 Length: Year
Credit: Visual/Performing Arts
Prerequisite: Intermediate to advanced ability on a band instrument
Fee: Performance attire S\$50-\$150. A limited number of instruments are available for rental at S\$150 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. This course may be repeated each year for credit. All Concert Band members are required to attend all scheduled performances, including after school or weekends.

Symphonic Band

ID: 46210 Grade: 9-12 Length: Year
Credit: Visual/Performing Arts
Prerequisite: Audition
Fee: Performance attire S\$50-\$150. A limited number of instruments are available for rental at S\$150 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. This course may be repeated each year for credit. All Symphonic Band members are required to attend all scheduled performances, including after school or weekends.

Wind Ensemble

ID: 46208 Grade: 9-12 Length: Year
Credit: Visual/Performing Arts
Fee: Performance attire S\$50-\$150. A limited number of instruments are available for rental at S\$150 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. This course may be repeated each year for additional credit. All Wind Ensemble members are required to attend all scheduled performances, including after school or weekends.

Jazz Improvisation

ID: 46217 Grade: 10-12 Length: S1
Credit: Visual/Performing Arts
Prerequisite: Successful audition to Wind Ensemble and teacher recommendation
Fee: Please see Wind Ensemble

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.

STRINGS

Concert Strings

ID: 46213 Grade: 9-12 Length: Year
Credit: Visual/Performing Arts
Prerequisite: Experience with a string instrument
Fee: Performance attire S\$50-\$120. Instrument rental at S\$150 per year if required.

Concert Strings is designed to help students with one to three years experience playing a string-instrument 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. This course may be repeated each year for credit. All students are required to attend all scheduled performances, including after school or weekends.

String Ensemble

ID: 46209 Grade: 9-12 Length: Year

Credit: Visual/Performing Arts

Prerequisite: Audition

Fee: Performance attire S\$50-\$120. A limited number of instruments are available for rental at S\$150 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 pedagogy as well as learn about the theory, style and form of music through the study and performance of quality literature. Study with a private tutor is highly recommended for students in this course. Attendance at scheduled performances is required. This course may be repeated for credit.

Chamber Strings

ID: 46229 Grade: 9-12 Length: Year

Credit: Visual/Performing Arts

Prerequisite: Audition

Fee: Performance attire S\$50-\$120. A limited number of instruments are available for rental at S\$150 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.

VOCAL MUSIC

Concert Choir - Chorale

ID: 46203/46205 Grade: 9-12 Length: Sem or Year

Credit: Visual/Performing Arts

Fee: Performance attire S\$50-\$150.

The SAS Chorale is a choir of males and females 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 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 participate in an annual Choir Festival with a well-known guest conductor. Students choosing this course may take it for just one semester (46203) or for the full year (select both 46203 and 46205). In order to be eligible to audition for SAS Singers it must be taken for the whole year. All Chorale members are required to attend all scheduled performances and rehearsals, including after school or weekends. This course may be repeated for credit.

Choral Ensemble - Chanterie

ID: 46212 Grade: 9-12 Length: Year

Credit: Visual/Performing Arts

Fee: Performance attire S\$50-\$150.

The SAS Chanterie is a choir made up of females 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 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 two specific activities of note; 1) The Annual Music Festival with a well-known guest conductor, 2) a collaborative performance with dance and drama classes. All Chanterie members are required to attend all scheduled performances and rehearsals, including after school or weekends. This course may be repeated for credit.

SAS Singers

ID: 46206 Grade: 9-12 Length: Year

Credit: Visual/Performing Arts

Prerequisite: Audition

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 serve as an elite group, singing 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 chorale 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. This course may be repeated for credit.

MUSIC EXPLORATORY WHEEL

The following courses are part of the music exploratory wheel and are designed to introduce students to aspects of music beyond the traditional areas of strings, vocal, and instrumental music. Many of these courses are offered in alternate years. Sufficient student interest is required for a course to be offered.

Introduction to Guitar

ID: 46214 Grade: 9-12 Length: Semester

Credit: Visual/Performing Arts

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 pedagogy 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 Grade: 9-12 Length: Semester

Credit: Visual/Performing Arts

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 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 barre chords, using a variety of accompaniment styles. Continued development of right hand technique (pick and finger style) will also be a focus. Students will improve their reading skills in both traditional notation and tablature. Increased knowledge of the guitar finger board will be a main goal for the course, along with the exploration of secondary chords and embellished chords. Students will be exposed to a wide range of quality literature designed to improve overall technique and musicianship. Students will also learn basic digital recording techniques using ProTools and an analogue mixing board. Students will leave this course with a "portfolio" CD of their recorded repertoire.

Music Performance & Recording Technology

ID: 46545 Grade: 10-12 Length: Semester II

Credit: Visual/Performing Arts

In this course students will learn to create, record and distribute music. It will focus on teaching students to become better performing artists and recording engineers and to support them in the pursuit of their own musical interests. Student projects can include work on student audition recordings, live concert recordings, and independent projects. Recording topics will cover basic functions of microphones, mixing desks, digital recording, and music editing software such as Garageband, Audacity, and Logic. Creating topics can include writing new music or working on existing songs for live performance or mastered recordings. Course topics for distributing music will cover creating CDs, podcasts, videos and use of social media. Students will work throughout the semester to create a portfolio of audio projects related to the students areas of interest and expertise.

MUSIC COURSES NOT OFFERED THIS YEAR

Some music exploratory courses are offered in alternate years (assuming there is sufficient student interest). The following will likely be offered again in 2017-18.

Vocal Technique

*ID: 46224 Grade: 9-12 Length: Semester I
Credit: Visual/Performing Arts
Note: Not offered in 2016-17, likely will be in 2017-18*

This class is designed for students who would like to improve their singing. Through a variety of genres (e.g., popular, musical, folk, classical) students will work on their individual vocal technique and music reading skills. Specific topics will include the following: 1) Vocal Warm-ups, 2) Vocal Skill and Support, 3) Performance Skill, 4) Stylization, and 5) Efficient Music Reading.

Music Exploration: Rock-n-Roll

*ID: 46226 Grade: 9-12 Length: Semester II
Credit: Visual/Performing Arts
Note: Not offered in 2016-17, likely will be in 2017-18*

This course is for anyone who wants to learn more about rock & roll. Students will study the history of rock and roll as a musical genre, and become familiar with the major styles of rock music along with the elements and artists that define those styles. Students will develop active listening skills and the ability to discuss rock music intelligently. Students will explore songwriting, chord changes, and the basics of the rock band instruments: guitar, bass, drums, and keyboards. In the spirit of Rock, no previous skills are necessary to take this class - just a willingness to learn. "Hey! Ho! Let's Go!" - The Ramones.

Music of Our Time: Modern Music/DJing

*ID: 46225 Grade: 9-12 Length: Semester I
Credit: Visual/Performing Arts
Note: Not offered in 2016-17, likely will be in 2017-18*

This course provides students with a deeper understanding of the popular music listened to on a daily basis. With the help of guest artists in the pop music and DJing fields as well as class discussion and research, students will intelligently discuss their favorite genres as well as write and perform them. The topics of DJing and modern popular music are broad; consequently, the students will determine many of the topics in this course.

Musical Theater: History and Production

*ID: 46226 Grade: 9-12 Length: Semester II
Credit: Visual/Performing Arts
Note: Not offered in 2016-17, likely will be in 2017-18*

This course provides an in-depth study and practical application of musical theater. Students will research, rehearse and perform material from the musical theater genre. In the first quarter the students will examine examples of Broadway musicals. In the second quarter the students will write, direct, produce and perform original musicals. No prior experience is necessary but students must be willing to try all aspects of the modern musical.

DANCE

Dance I - Introduction to Dance

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

This course is designed for any male or female who would like to use the assets of dance to improve physical fitness and to develop the confidence and ability to dance either for fun or as a performer. This course combines fitness, dance technique, and dance choreography. The class is designed to improve physical skills such as, posture, strength, flexibility, stamina, and balance, as well as introduce choreographic and improvisational techniques. Students will learn the techniques and vocabulary for various types of dance, including ballet, lyrical, contemporary, jazz, hip hop styles. Students will incorporate what they have learned into creative dance choreography. Appropriate injury prevention techniques will be explored along with aspects of the anatomy and nutrition. Students will perform for each other in class and have the option to perform at the semester show. All students are recommended to take Dance 1, despite previous studio dance experience. Concepts covered within a dance education class are different to what is covered in a studio technique class. Dance education and studio dance compliment each other beautifully.

Dance II

*ID: 48003 Grade: 9-12 Length: Semester
Credit: PE or Visual/Performing Arts
Prerequisite: Dance I or equivalent (not technique/studio) experience*

Dance II is a course designed for students who have a serious interest in dance and who wish

to increase their knowledge and skills. The course continues to focus on fitness, dance choreography, various styles of dance, and body mechanics techniques, but at a more complex level. Students will be expected to master more detailed technique, will explore creative choreographic expression, and will accomplish and assimilate dance skills at a more rapid pace. Students will also be asked to provide more in depth choreography analysis and to use more complex choreographic forms in their own work. Students will perform for each other in class and have the option to perform at the semester show.

Dance III

*ID: 48004 Grade: 9-12 Length: Semester
Credit: PE or Visual/Performing Arts
Prerequisite: Dance II or equivalent dance education (not technique/studio) experience*

This course allows students to continue their technical training in dance, while offering them more opportunities to explore choreography. It will also prepare students for the auditions for Dance Performance. Dance III has three major goals: 1) To continue building and strengthening the dancers' technique in a variety of dance forms; 2) The course will also provide an opportunity for dancers to study and discuss and analyze dance history, philosophy and theory concepts to a greater depth; 3) To allow students the opportunity to choreograph longer pieces and pieces for different purposes. These performances will be performed and recorded. There are possibilities for performances outside of the classroom in this course. This class also provides an opportunity for more advanced dancers to learn the skills needed to teach creative dance classes to their peers and the wider community. Some costs may be incurred for the purchase of costumes and shoes.

Dance Technique

*ID: 48030 Grade: 9-12 Length: Semester II
Credit: PE or Visual/Performing Arts
Prerequisite: Dance I*

This class provides an intensive approach to skill development, etiquette, discipline and knowledge of the three dance styles: ballet, jazz and modern/contemporary. Each technique class will cater to specific needs and abilities. The semester is broken into three sections where each dance style is studied and practiced intensively. This course differs from the other dance courses with less focus placed on choreographic skills and more focus on practical dance skills and physical skills.

Dance Performance

*ID: 48006 Grade: 10-12 Length: Year
Credit: Visual/Performing Arts
Prerequisite: Audition (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. They will also learn more about choreography, dance design and choreographic devices. They will be expected to work as a team with guidance to teach, stage and direct their own dances for the semester production. 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.

ADVANCED OPTIONS

AT Performing Arts

*ID: 46325 Grade: 12 Length: Year
Credit: Visual/Performing Arts
Prerequisite: Completion of 3 years in a SAS performance group and completion of application process detailed below. Specific strands may also include course prerequisites.*

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 Music strand is for serious music students. AT Music students will expand their group performance experience by performing as an individual and by deepening their skill as music analysts, theorists and historians. The strand was collaboratively developed and endorsed by Dr. Travis Cross from University of California Los Angeles in 2016.
2. 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 production, but will also engage in guided research, exploration of methodologies, development of a performance, and in-depth reflection. This strand was collaboratively developed and endorsed by Cyrus Parker Jeannette, Dean of the College of the Arts, California State University at Long Beach in 2016.
3. The Drama strand requires students to work collaboratively to create a piece of original theatre and has a prerequisite of 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. This strand was collaboratively developed and endorsed by Mark Charney, Associate Director of National Critics Institute, Eugene O'Neill Theatre Center and Head of Theatre and Dance at Texas Tech University in 2016.

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. The course requires rigorous study and emphasizes in-depth research. Like an AP course, this course has an additional grade point weighting of 0.5.

PHYSICAL EDUCATION

Students must successfully complete three semester courses in Physical Education. 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. All students in physical education classes are required to participate actively in physical fitness, conditioning, and aerobic activities on a regular basis. Students will be assessed regularly on the rules and skills of the sports being taught as well as on their level of fitness.

Technology is an integral part of the PE curriculum and the department adopts relevant applications as they become available. Due to the special nature of the subject area, the scope reaches beyond the laptop driven research and interaction framework to include specific software like the Fitness Gram program that each student completes twice each semester. Results are linked to age specific scores from North America to provide teachers, students and parents with a comparison to others.

Video recording of skills acquisition are routinely utilized to ensure that students are grasping specific movement patterns inherent in the learning of skills. Heart rate monitors are utilized so that students and teachers can track real time fitness levels in many courses. The use of pedometers allows the student to ascertain the volume of movement they are involved in daily and stopwatches help to quantify progress.

Laptops are used to keep abreast of best practices and research on recent methodology of movement as well as to reinforce learning on a cognitive scale; up to 25% of the course grade is based upon theoretical retention of information.

Field Hockey, Softball, and Golf

*ID: 48015 Grade: 9-12 Length: Semester
Credit: Physical Education*

This course includes basic instruction in three areas. In field hockey, students will learn to properly handle the hockey stick and develop the skills of passing, receiving, dribbling, shooting, tackling, and goal keeping. In the softball unit, students will learn the primary skills of softball throwing, catching, running and batting. They will develop skills required to play offensive and defensive positions. Upon completion of the

softball and field hockey units, students will be able to employ appropriate strategies in game situations and will demonstrate skill in playing and officiating. At the conclusion of the course, students should be able to play softball and field hockey with enjoyment and confidence. Golf makes up the final unit of the course, which is designed for both beginners and experienced students. Students will develop many golf skills including hitting off a tee, driving with an iron, chipping, and putting. Course etiquette, score card understanding, safety aspects, penalties and club selection will be covered. Instruction will be augmented with sessions at a local driving range. Upon completion of the unit, students will have the skills and proficiency to play a regular round of golf.

Fitness for the Body and Mind

*ID: 48024 Grade: 9-12 Length: Semester
Credit: Physical Education*

This course is designed to teach students the process of using exercise to not only challenge the body but also to stimulate the brain by using 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 various 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 stimulate cognitive development through providing physical and mental challenges, which in return, result in a stronger focus, self discipline and ultimately in increased self confidence.

Group Fitness

*ID: 48001 Grade: 9-12 Length: Semester
Credit: Physical Education*

This is a group exercise program with an emphasis on strength and fitness conditioning offered to students looking to get stronger, fitter and more importantly, to be able to move more efficiently through a variety of fitness related exercises and workouts. The course is designed to encourage intense and vigorous participation with a focus on the basic foundations of movement using a wide variety of fitness tools to enhance movement efficiency. The following equipment will be used: BOSU, Kamagon Balls, SMART boards, Slaxix bands, Slingshots, Suspension Trainers, Stability balls, Medicine Balls, Slam Balls, Kettlebells, Barbells, Dumbbells, Sandbells, Sandbags, Battle

Ropes, Ladders, and Hurdles. Student will learn to train like an athlete and will learn exercises to increase strength, endurance, coordination, flexibility and balance through these various forms of group fitness exercises using a distinct progressional method. 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 Grade: 9-12 Length: Semester
Credit: Physical Education
Prerequisite: Group Fitness

This course will provide students with the opportunity to get a deeper understanding behind 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 and adults during class time or through the "House of Pain" SAS after school fitness club. Students will have the opportunity to set up their own training practices, market the program to students or adults, and teach, coach, or train small groups. 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 covered in the course.

Indoor Team Sports

ID: 48009 Grade: 9-12 Length: Semester
Credit: Physical Education

This course is designed to develop and improve ball skills, teamwork, muscular strength and endurance. Students will learn the basic skills, techniques and strategies of volleyball, basketball, team handball and indoor soccer. They will practice these skills in individual and group drill situations. When students have mastered these basic skills, regulation games will be played. Students will be tested on all pertinent theoretical aspects of each activity.

International Sports

ID: 48008 Grade: 9-12 Length: Semester
Credit: Physical Education

This PE course will include the following 3 core disciplines/activities: Netball, (Indoor) Cricket and Archery. Additionally students play 2 of the following other activities: Ultimate Frisbee, Sepak Takraw, Tchouk Ball and Lacrosse. Each of the sports will focus on fundamental movement patterns (i.e. passing & receiving, shooting, batting, running, fielding) designed to make the student competent with regard to the basic skill sets in order to demonstrate and participate in organised play and interclass competition. At the conclusion of the course, students should be able to play all sports with enjoyment and confidence. A comprehensive skill and written assessment will be administered at the conclusion of each unit, as well as a practical based final exam project at the end of the course.

Climbing and Adventure Training

ID: 48028 Grade: 9-12 Length: Semester
Credit: Physical Education

This course is designed to introduce students to elements of adventure sports and adventure training. Adventure training challenges students in teams and as individuals through games and engineering configurations. The semester starts with trust building activities needed for both the climbing wall and the challenge course. Students will learn different types of knots and safety information needed to participate. Bouldering, belay work, various climbing routes, rappelling and constant communication are skills that will be recurring through out the semester as we start on the indoor climbing wall and slowly and safely work our way to the high elements on our outdoor ropes course. An added aspect will be a fitness component that will support and enhance the students' endurance, flexibility and strength in order to become more efficient on the wall.

Personal Defense and Combatives

ID: 48027 Grade: 9-12 Length: Semester
Credit: Physical Education

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.

Racquet Sports

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

This course is designed to expose the students to five distinct racket activities: badminton, table tennis, pickleball (modified indoor paddle tennis), soft indoor tennis, and court tennis. The course will focus on stroke development, game analysis and play refinement. Students will work on improving hand-eye coordination and reaction time response. Singles and doubles play strategies will also be presented. Practicing court etiquette, officiating, scoring and participating in round robin or bracket tournaments will conclude the class activities. A comprehensive skill and written assessment will be administered at the conclusion of each unit.

Soccer, Flag Football and Rugby

*ID: 48014 Grade: 9-12 Length: Semester
Credit: Physical Education*

Through this course students will become knowledgeable about the rules and regulations of soccer, flag football, and rugby and will be able to officiate games. In soccer, students will learn to perform skills at a satisfactory ability level, integrate soccer skills into a regular game situation, apply rules and strategies, and also teach skills to the other students. In the flag football unit, students will learn locomotor skills such as running (forward, backwards), shuffling sideways, handing the ball off to another player, throwing, and catching with good biomechanics. Basic offensive and defensive plays and strategies will be explored and implemented in order for the student to fully understand and enjoy the experience of participation in flag football. Students will demonstrate knowledge of, correctly follow, and apply the rules of flag football. In the final unit of this course, coeducational rugby will be taught and played. Touch rugby will be introduced during the initial period of the course. After mastering the basic skills and techniques of the game, students will be able to apply them in scrums, rucks, mauls, lineouts, and kickoffs in drills and game situations.

Track and Field: Running Events

*ID: 48017 Grade: 9-12 Length: Semester
Credit: Physical Education*

This course will concentrate on the sprints, relays, and middle distance running events. The 100, 200, 400, 800 and 1500 meter distances will be covered as well as the 4 x 100 and 4 x 400 relays. Students will complete the various training methodology for each discipline along with the relevant theory associated for the successful completion of the events.

Weight Training and Conditioning I

*ID: 48018 Grade: 9-12 Length: Semester
Credit: Physical Education*

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 and Conditioning II

*ID: 48019 Grade: 9-12 Length: Semester
Credit: Physical Education
Prerequisite: Weight Training I*

This course is designed to continue the students' knowledge and skill in the components of physical fitness: strength, muscular endurance, cardiovascular endurance, agility and flexibility. The resistance-training 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.

Lifeguarding

ID: 48023 Grade: 10-12 Length: Semester

Credit: Physical Education

Prerequisite: Must be at least 15 years old and be able pass the prerequisite swimming test. If uncertain about your swimming skills, check with a PE teacher before requesting this course.

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. The American Red Cross Lifeguard Training Program curriculum is used for this course. Upon successful completion students will receive the following certificates: Lifeguarding, First Aid, CPR and AED Administration for the Professional Rescuer.

Dance Courses

See entry in Visual/Performing Arts section

ADVANCED OPTIONS

AT Kinesiology

ID: 48000 Grade: 11-12 Length: Semester

Credit: Physical Education

Prerequisite: Completion of Biology and a B+ in Chemistry or B in Accelerated Chemistry

This course is designed to provide students with selected foundational knowledge in kinesiology. Modules focus on basic anatomy and introduce key aspects of exercise physiology, biomechanics, and motor behavior. Students will have the opportunity to apply course content through project-based learning. Projects may look to explore and investigate areas such as human performance, personal wellness, public health, and quality of life across the lifespan. This course aims to prepare students to pursue further studies in physical education and medical fields. This course was collaboratively developed and endorsed by Professor Collin Webster at the University of South Carolina in 2016. 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. The course requires rigorous study and emphasizes in-depth research. Like an AP course, this course has a grade point weighting of 0.5.

HEALTH/WELLNESS

All students are required to take one semester-long Health and Wellness course in grade 10. All courses will include the following critical issues components: human sexuality and diseases, drug and alcohol issues, and decision-making.

Body Systems and Diseases

*ID: 48011 Grade: 10-12 Length: Semester
Credit: Physical Education*

This course is designed to help students better understand body systems and their functions. Students will understand the impact of personal health, behaviors and life-styles on body systems. Emphasis will be placed on such important diseases and disorders as heart disease, cancer, diabetes, and AIDS. Students will become aware of the major communicable and noncommunicable diseases with the emphasis on prevention, treatment, and significant medical breakthroughs. Students will also learn how research and medical advances influence prevention, life-style, wellness and the control of health problems. Knowledge of the short and long term effects associated with the use of alcohol, tobacco, and other drugs on reproduction, pregnancy, and the health and wellness of an individual will be emphasized. A preventative versus a curative approach will be taken in order to encourage students to take responsibility for their own life-styles and wellness.

Safety and First Aid

*ID: 48012 Grade: 10-12 Length: Semester
Credit: Physical Education*

This course is designed to help students become aware of their surroundings and how they can affect their own and other's safety, and to help them deal with potential accidents and hazardous situations. The First Aid section will teach students what to do in a number of emergency medical situations. The course will follow American Red Cross Emergency Response programs for First Aid and CPR. Besides becoming proficient in CPR and other immediate related life saving techniques, complete emergency response first aid training will examine the most common injuries and situations associated with sports and other activities. Students will receive Red Cross certifications in both First Aid and CPR. Additionally, a 3-4 week study review of Critical Issues will be included on a variety of topics

like alcohol, tobacco, (mis)used drugs, nutrition, sexuality, STIs and HIV/AIDS.

Nutrition and Physical Fitness

*ID: 48007 Grade: 10-12 Length: Semester
Credit: Physical Education*

This course provides students with current nutritional information, focusing on the interrelationships among diet, exercise and weight control. The effects of stress, as well as measures to combat stress in our daily lives, will be examined. The components of physical fitness, strength, muscular endurance, cardiovascular endurance, agility and flexibility will be studied. The course also examines training methods designed to achieve total fitness. The relationship between healthy life-styles and the attainment of wellness will also be explored.

Life Skills and Human Development

*ID: 48010 Grade: 10-12 Length: Semester
Credit: Physical Education*

This course provides students with a solid knowledge base about important personal and social skills to help them make appropriate life-style decisions. Topics include the misuse and abuse of alcohol, tobacco and illicit drugs; human development, including reproduction, development of relationships, marriage and divorce; and sexually transmitted diseases, including behaviors that lead to them and how to avoid them. Student participation in discussions and projects is a key element. Students should be mature and forthcoming in their attitudes toward the subject matter.

OTHER COURSES

LEARNING SUPPORT

SAS offers limited services to meet the needs of students who need support, assistance, or further instruction in order to be successful in the regular academic program. The Learning Support Department provides educational intervention to students identified as needing support in their academic course work. The goal of the program is to allow students with special needs to achieve meaningful success at SAS. By utilizing laptop computers and equipment such as visualizers, students will be able to reinforce newly taught concepts introduced in their regular subject classrooms to strengthen their writing, math and study skills.

Learning Support

*ID: 47501/2 Grade: 9-12 Length: Year
Credit: May be taken for credit or non-credit
Prerequisite: By school professional referral*

The goal of this course is to help students acquire the skills necessary for success in their academic program. This course includes developing students' executive function skills, development of learning strategies and behaviors for academic success. Through small group instruction, students are assisted in applying these skills and strategies to their course work. This course is not intended to be used as supervised study.

Reading/Language Arts Lab

*ID: 47510-9th / 47511-10th Length: Year
Credit: May be taken for credit or non-credit
Prerequisite: By school professional referral*

This course is designed to provide assistance to identified students in grades 9 and 10 to improve their reading, writing, speaking, listening, and vocabulary skills in English. Students address strategies to read and write effectively. Interventions target reading comprehension, reading speed, organizing ideas for writing, developing writer's craft, revision process, and using grammar and mechanics to compose clear sentences, based on each student's individual needs.

INTERIM SEMESTER

Students do not select their Interim Semester courses until the beginning of the academic 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 desired student learning outcomes 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. Beginning with members of the Class of 2016, students must complete at least one service learning Interim course.

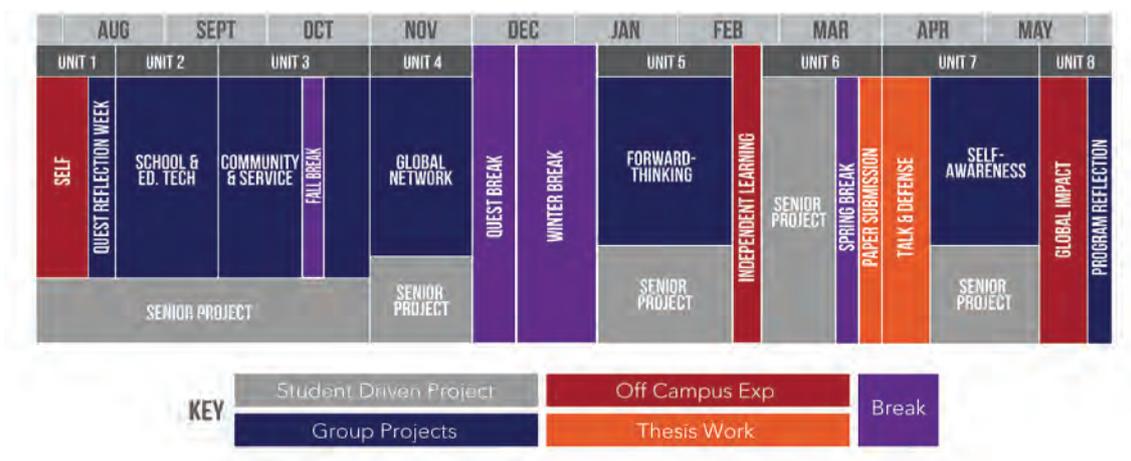
Eco-Adventure: These courses are designed around the belief that the outdoors provides the greatest context for humans to grow socially, emotionally and academically. As such, eco-adventure courses provide students opportunities to learn and develop physically and intellectually while being fully immersed 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.

QUEST

Quest is an exciting and innovative new program for Seniors at SAS. Students who are interested in Quest should plan their high school career to ensure their eligibility in their senior year.

Quest provides structure and time to support students in pursuing their curiosity and passions. Instead of taking traditional courses, students will earn credits by engaging with interdisciplinary projects that are personalized to their interests. The program is designed to allow flexibility in scheduling so that students have the time to explore, innovate, and be inspired. Students will also develop skills and connections to the real world through different experiences such as:

- Corporate partnerships
- Community outreach
- Interdisciplinary projects
- Off-campus experiences



YEAR OVERVIEW

The Quest calendar is designed to ensure students can participate in extracurricular and spirit activities. With the exception of starting school two weeks early and receiving two extra weeks for winter break, the Quest calendar aligns with the SAS calendar.

The units stress skill acquisition through interdisciplinary projects personalized to the interests of each student. Quest students explore various topics, forms of communication, and are encouraged to engage with school, community, and global networks. Throughout the year, students will practice time-management, project organization and develop skills such as critical thinking, creativity, and communication. The year culminates with the senior project thesis paper, thesis talk, and thesis defense, as well as a student-planned interim trip.

DAILY SCHEDULE

Each student in Quest will schedule their time around the Quest community time, group project work and the senior project. Throughout the day, the advisors will regularly provide personalized resources and assistance to ensure that students are meeting expectations and discovering strategies that work for them to be responsible for their own learning. As such, there is no "set schedule" for how a Quest student will spend their time. Students will have flexibility and accountability to plan their time as needed.

To help visualize the uniqueness of the flexibility afforded the students, below is what a daily schedule of a Quest student might look like: Credit Offerings: AT, AP and College Preparatory

Required attendance at assigned location for the whole Quest community					
Individual student time scheduled by the student around their community and group obligations					
Group time scheduled to work on projects. Locations may vary.					
8-10 AM	SKYPE WITH RICK AVALOS - TESLA H.R.	SENIOR RESEARCH PROJECT	LATE START	VISUALIZING DATA WITH MS. POLUAN	GROUP PITCHES PRACTICE TIME (AUTHENTIC AUDIENCE)
10-12 AM	GROUP PROJECT TIME	OFF CAMPUS @ THE HUB: TO EXPLORE START UPS	GROUP PROJECT TIME	SENIOR RESEARCH PROJECT	WRITERS WORKSHOP WITH MS. WALTHALL
12-2 PM	CONFERENCE WITH TEACHERS		COMMUNITY MEETING		
2-3 PM	GROUP PROJECT TIME	DESIGN THINKING WITH MR. BRIGHT	SENIOR PROJECT CHECK-IN	GUEST SPEAKER: APPLE DESIGNER	PORTFOLIO/ EARLY RELEASE
AFTER SCHOOL	EXTRACURRICULARS	EXTRACURRICULARS	EXTRACURRICULARS	EXTRACURRICULARS	EXTRACURRICULARS
EVENING		7-9 NETWORK WITH PROFESSIONALS			

TRANSCRIPTS

Students will digitally document their learning experience through a personal learning portfolio. Quest provides personalized experiences for each student therefore this process will look different for each person throughout the day.

Students will be evaluated using rubrics developed using the educational gold standards of today. Rubrics focussed on skills have been adapted from:

- College Board Advanced Placement
- Ed Leader 21
- Common Core
- Project Lead the Way
- IDEO and Stanford dSchool
- Association of American Colleges and Universities

The focus on skills will be reflected on the transcript. Quest students are guaranteed 6.0 High School credits with an optional Independent Learning Credit available.

ACADEMIC SKILLS	1.0 AT English: Composition & Research OR English: Composition & Research 1.0 AT Math: Data Analytics OR Math: Data Analytics 1.0 AT Science: Design Thinking OR Science: Design Thinking	English Math Science
DSLO SKILLS <small>(Desired Student Learning Outcomes)</small>	1.0 Cultural Awareness & Collaboration 1.0 Critical Thinking & Reasoning 1.0 Creativity & Innovation	Social Studies Elective Elective
OPTIONAL	1.0 Independent Learning Credit	Elective

QUEST CREDIT OFFERINGS

The following are the credits that students will earn in Quest through the interdisciplinary projects in each unit and the Senior Project. Students may choose to receive all, some or no Advanced Topic credits offered through Quest, and these wishes should be communicated during enrollment in the Quest program. Students who wish to earn Advanced Topic credits will individually be held to a higher standard of skill acquisition and will be defining their learning objectives and how they personally go beyond the requirements. In addition, Advanced Topic credits have prerequisites, so students should make sure they meet the requirements. All students will submit their Senior Project thesis, talk and defense to the Quest advisors and community partners who are experts in the field of the student's research. The main difference between college preparatory and AT is the expectations for the level of skills.

English: Research & Composition

ID: 48525 Grade: 12 Length: Year
Credit: English

In order to receive credit in English Research and Composition students will meet advanced research requirements, and go beyond these requirements by meeting oral communication and written composition requirements aligned to EL21 and Common Core standards. Students will conduct thorough research of a self-generated research question through gathering, evaluating and analyzing scholarly journals, as well as completing a statistical analysis of their own data. Their research will be utilized throughout the year to demonstrate their competency in writing a thesis paper, delivering engaging presentations and an oral defense. Students will deliver multiple presentations that consider how style, content and the advanced use of technology contribute to the power, persuasiveness or beauty of a text (e.g. making documentaries, digital portfolios, websites, crafting arguments that rely on rhetoric to influence an audience) culminating in their Senior Project, Talk and Defense which will be reviewed by an expert in the field of research. Students will also participate in large and small group discussions, communicate effectively with members of the global community.

AT English: Research & Composition

ID: 48526 Grade: 12 Length: Year
Credit: English
Prerequisite: Completion of AP Seminar, AP Research, or AP Language and Composition. An A or higher in Grade 11 English course, or an English teacher recommendation.

Please see above for detailed description of English: Research and Composition. Students wishing to earn Advanced Topic credit in English: Research and Composition will practice narrative, informative, and argumentative skills at a level that demonstrates in-depth application of said skills.

Note: Quest students who completed AP Seminar and earned a score of 3 or better on the Exam may choose to submit the thesis papers they produce in this course to the College Board for AP Research Exam scoring. These students will be supported within Quest to follow the AP Research guidelines. To earn the AP Capstone Diploma, students must earn scores of 3 or higher on the AP Seminar and AP Research Exams and on four additional AP Exams.

Math: Data Analytics

ID: 48527 Grade: 12 Length: Year
Credit: Math
Prerequisite: Completion of Geometry.

In order to receive credit in Data Analytics, students are required to demonstrate their learning in interpreting categorical and quantitative data, making inferences and justifying conclusions, conditional probability and rules of probability, and using probability to make decisions. Students do not need to dwell on the details of computation - the main focus is on understanding a few deep concepts and interpreting data and the results of statistical analysis. Students are required to collect, organize, represent, and analyze data through the use of statistical software or programming language.

AT Math: Data Analytics

ID: 48528 Grade: 12 Length: Year
 Credit: Math
 Prerequisite: Completion of Algebra 2/Trig with a B or higher, or teacher recommendation

Please see above for detailed description of Math: Data Analytics. 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 analyzing skills. Students are required to collect, organize, represent, and analyze their own data through the use of statistical software or programming language. Students will also be defining their learning objectives and how they personally go beyond the requirements.

Science: Design Thinking

ID: 48529 Grade: 12 Length: Year
 Credit: Science
 Prerequisite: Completion of Chemistry or science teacher recommendation.
 Note: For potential college athletes, this course does not meet the NCAA Division I core course requirement for Science. See counselor for details.

Students will learn to produce strong designs, become more effective problem solvers, and communicate effectively with high emotional and intellectual impact. This project-based course requires that students apply engineering, science, math, and technology to solve complex, open-ended problems in a real-world context. Students will focus on the process of defining and solving a problem, not on getting the "right" answer. In practice, rigor in process and tools must be balanced with flexibility and adaptability towards the problems they solve, so instruction focuses on teaching multiple tested, iterative design processes as well as techniques and mindsets to sharpen creative analysis. Guest lectures from all disciplines illustrate different approaches to design thinking. This course develops students' skills to conceive, organize, lead, implement, and evaluate successful projects in any discipline.

AT Science: Design Thinking

ID: 48530 Grade: 12 Length: Year
 Credit: Science
 Prerequisite: Completion of Chemistry with a B or higher, or completion of Physics with a B or higher, or science teacher recommendation

Note: For potential college athletes, this course does not meet the NCAA Division I core course requirement for Science. See counselor for details.

Please see above for detailed description of Science: Design Thinking. AT-level students will be required to go above and beyond the college preparatory Design Thinking course requirements and demonstrate a higher level of rigor throughout the processes, vetting, production, application and reflection that occur over the course of the year.

Cultural Awareness & Collaboration

ID: 48533 Grade: 12 Length: Year
 Credit: Social Studies

In order to receive credit in Cultural Awareness and Collaboration, students are required to complete a thematic study of the human experience through the lenses of history and literature, with a focus on skills development. Students will explore critical issues, individuals and turning points in the histories of the world. Students will analyze the extent to which ideologies, people, literature and events developed and shaped both our history and its contemporary issues. Students will be challenged to think critically and to make thoughtful connections as they draw on a variety of resources to understand the human experience.

Creativity & Innovation

ID: 48531 Grade: 12 Length: Year
 Credit: Elective

In order to receive credit in Creativity and Innovation, students are required to explore individual and organizational factors that stimulate and inhibit creativity in individuals and teams. Students are expected to demonstrate their ability to take risks and develop creative solutions and products for specific purposes. Students will reflect deeply within their portfolio that shows the process of their thinking, self-assessment, reflection, and exemplary creativity, that meets the requirements of the assessment rubric.

Critical Thinking & Reasoning

ID: 48532

Grade: 12 Length: Year

Credit: Elective

In order to receive credit in Critical Thinking and Reasoning, students are required to demonstrate their learning in explaining issues, selecting and using information to investigate a point of view or conclusion, thoroughly analyzing context and assumptions, taking a specific position and discussing the limits of position, and creating a logical conclusion based on the evidence and perspectives discussed.

FLEXIBLE LEARNING OPTIONS

SUMMER SEMESTER

The SAS Summer Semester opens a new learning option, encouraging students to extend, diversify, and accelerate learning from the academic school year. It will allow students to explore new learning paths not available through existing course offerings. The Summer Semester program focuses on the whole child and presents learning opportunities in four distinct categories: intellectual curiosity, creative expression, sports and wellness, and travel adventures and service. Students will have an opportunity to select programs from all categories.

SAS is partnering with world leaders in a variety of fields to offer leading edge programs not available elsewhere in Singapore. These partners have designed exclusive programs for the SAS Summer Semester student. In addition to an SAS Summer Semester transcript, students participating in this program will receive a Certificate of Participation from the partnering organization.

An SAS Summer Semester transcript will become a part of the student's official academic record. Courses that are eligible for credit will be listed on the SAS transcript as a P (pass) grade, which is similar to how credits are listed on the SAS transcript for students transferring into SAS from any other high school. Credits earned through the SAS Summer Semester could be used to fulfill SAS graduation requirements but would not be included in the calculation of a student's SAS grade point average (GPA). A Summer Semester transcript, including the actual grades or comments, would be sent to colleges as an additional page of the SAS transcript.

SCHOOL YEAR ABROAD

SAS, in partnership with the School Year Abroad (SYA) organization, is proud to offer SAS high school students the opportunity to participate in a one-year study abroad opportunity during their junior or senior year. SAS joins a consortium of elite independent schools including, Phillips Academy Andover, Phillips Exeter, St. Paul's School, Taft, and the American School of London in offering this program.

SYA is an independent nonprofit institution that owns and operates campuses in France, Italy, Spain, and China. SYA is the only high school study abroad program that requires students to live with a host family for an entire academic year. Our partnership with SYA allows SAS students to access their four language immersion campuses around the world for a year, while remaining SAS students.

Students apply to join SYA by completing an application on the www.sya.org website. Students must apply by the end of January to participate in the program during the next academic year, with acceptance decisions made shortly thereafter. Prior to applying, students should speak with their counselor to make certain the program will serve their needs and to review their SAS graduation credits. If accepted by SYA, tuition and fees will be paid directly to SYA. Only the SAS annual enrollment fee, which is required of all SAS students, would be required by SAS.

At the conclusion of the academic year an SYA transcript will be sent to SAS and will become a part of the student's official academic record. The credits will be listed on to the SAS transcript as a P (pass) grade, which is similar to how credits are listed on the SAS transcript for students transferring into SAS from any other high school. Credits earned through SYA could be used to fulfill SAS graduation requirements but would not be included in the calculation of an SAS grade point average (GPA). The actual SYA transcript, including the grades earned, would be sent to colleges as a second page of the SAS transcript providing colleges and universities with a full understanding of the SYA program.

APPENDIX I: COURSE SELECTION INSTRUCTIONS

Before Requesting Courses

After reviewing the information in this guide, use the four-year planning chart in the Appendix or in Family Connection 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 a challenging academic program in which they can be successful while also having time to participate in some activities.

How to Request Courses

1. Either parents or students can login 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 early April. Follow the on-screen instructions to select courses for next year.
2. All students must enroll in the correct number of "credit hours." Students going into grades 9 or 10 must have seven, and students in grades 11 or 12 must have between six and seven credits.
3. Click a subject area to see the available courses. The list of available courses is based upon the courses already completed, the prerequisites that have been met, or the recommendations entered by current teachers. New students who recently joined our school and have no SAS course history may appear to be missing a prerequisite. See a counselor so that prerequisite courses can be manually added.
4. PowerSchool disconnects from the server after 15 minutes of no activity. If too long has been spent choosing courses, when clicking submit the login screen will appear instead of a summary. If that happens, login again and re-enter course requests.
5. Once the correct number of credits has been entered, click "Submit" and the course requests will be displayed. Until the request period ends, students or parents can go back and review or change course requests.
6. For students who do not plan to return to SAS next year, please complete this process anyway. It will help us plan for new students and can help students think about courses to consider whether at SAS or a different school. Teachers and counselors are happy to answer any questions about this request process or any of the SAS courses.

Reviewing Graduation Credits

After submitting course requests and a summary of courses has been displayed, students can check graduation progress by clicking the "View Graduation Progress" hyperlink. These charts combine the credits that have been completed, are in-progress this semester, and have been requested for next year. The top graph shows progress at meeting minimum SAS graduation requirements, and the bottom one shows progress toward fulfilling typical college preparatory expectations.

While students don't need to be concerned if PowerSchool temporarily assigned credits in a different combination than expected (e.g., Dance could be assigned to either PE or Art), each area should be fulfilled once senior courses are entered. If not, stop by the counseling office.

SAS COURSE OPTIONS IN 2016-2017

English

English 9 YR
 World Studies 2xYR
 English 10 YR
 American Studies 2xYR
 Advanced Composition S1
 American Lit S1
 British Lit S1
 Lit/Imagination S1
 Read, Write, & Publish S1
 Asian Literature S2
 Studies in Satire S2
 World Literature S2
 21st Century Classics S2
 Communications S2
 AP English: Language YR
 AP English: Literature YR
 AT Writing Seminar YR

Mathematics

Algebra IA YR
 Algebra IB YR
 Algebra I YR
 Geometry YR
 Conceptual Algebra II YR
 Algebra II/Trig YR
 Functions/Stats/Trig YR
 Accelerated Math I YR
 Accelerated Math II YR
 Pre-Calculus* YR
 Discrete Math YR
 AP Statistics YR
 AP Calculus AB YR
 AP Calculus BC YR
 AP Cal BC/Multivariable YR

Science

Life/Biological

Biology YR
 Molecular Biology* YR
 Biotechnology SM
 Environmental Science SM
 Forensic Science SM
 Marine Biology SM
 Anatomy & Physiology SM
 Zoology SM
 AT Tropical Eco/Envro Sci. SM
 AP Biology YR

Physical

Physical Science YR
 Chemistry YR
 Chemistry, Accelerated* YR
 Physics YR
 AP Chemistry YR
 AP Physics 1 YR
 AP Physics 2 YR
 AP Physics C YR

Social Studies

World Studies 2xYR
 World History YR
US History
 American Studies 2xYR
 US History & Govt YR
 AP US History YR
History, Culture, Geography
 History of China SM
 History of Malaysia/Sing... SM
 Modern Asian Persp SM
 Urban Planning in Sing SM
 AP World History YR
 AP Human Geography YR
 AP US Gov/Politics S1
 AP Comparative Gov S2

Business/Economics

Business SM
 Economics SM
 Behavioral Econ/Game SM
 Entrepreneurship SM
 AP Economics YR
 Adv Econ: Globalization ... SM

Social Studies Electives

Psychology SM
 AP Psychology YR

World Languages

French: Novice YR
 French: Intermediate YR
 French: Intermediate II YR
 French: Intermediate III YR
 French: Intermed High YR
 French: Intermed High II ... YR
 French: Intermed High III... YR
 French: Advanced YR
 AP French YR
 Spanish: Novice YR
 Spanish: Intermediate YR
 Spanish: Intermediate II YR
 Spanish: Intermediate III ... YR
 Spanish: Intermed High YR
 Spanish: Intermed High II.. YR
 Spanish: Intermed High III. YR
 Spanish: Advanced YR
 AP Spanish YR
 Chinese: Novice YR
 Chinese: Intermediate YR
 Chinese: Intermediate II YR
 Chinese: Intermediate III ... YR
 Chinese: Intermed High YR
 Chinese: Intermed High II . YR
 Chinese: Intermed High III YR
 Chinese Near Native YR
 AP Chinese Near Native II. YR
 AP Chinese Lang/Culture .. YR
 AT Chinese Lang: History .. YR
 Japanese IV YR

Visual/Performing Arts

Art/Ceramics
 Art Foundations SM
 Ceramics I SM
 Ceramics II SM
 Printmaking SM
 Studio Art YR
 AP Art: Drawing YR
 AP Art: 2D Design YR
 AP Art: 3D Design YR
Theater
 Stagecraft SM
 Foundations SM
 Improvisation SM
 Adv Improvisation SM
 Theater Production SM
 Film/Acting Ensemble SM

Photography/Film

Filmmaking SM
 Adv Filmmaking SM
 Digital Photography SM
 Adv Digital Photography.. SM
 Film/Acting Ensemble SM

Instrumental Music

Concert Band YR
 Symphonic Band YR
 Wind Ensemble YR
 Jazz Improvisation S1

Strings

Concert Strings YR
 String Ensemble YR
 Chamber Strings YR

Vocal Music

Concert Choir SM/YR
 Choral Ensemble YR
 SAS Singers YR

Music Exploratory Wheel

Guitar SM
 Advanced Guitar SM
 Music Perf/Recording S2

Dance

Dance I SM
 Dance II SM
 Dance III SM
 Dance Technique S2
 Dance Performance YR

Advanced Option

AT Performing Arts YR

TEC

Tech/Computers/Finance

Emerging Tech SM
 Computer Science I SM
 Robotics SM
 Robotics Science SM/YR
 Graphic Design SM
 3D Graphics SM
 Digital Game Develop SM
 Engineering Science YR
 Structural Engineering SM
 AP Computer Science YR
 Personal Finance SM

Journalism

Video SM
 Newspaper YR
 Yearbook YR

Capstone/Catalyst

AP Seminar YR
 AP Research YR
 Independent Learning SM
 SAS Catalyst Project SM

Physical Education

Fld Hockey/Softball/Golf.. SM
 Fit for the Body/Mind SM
 Group Fitness SM
 Group Fitness II SM
 Indoor Sports SM
 International Sports SM
 Climbing/Adventure Tr SM
 Personal Defense SM
 Racquet Sports SM
 Soccer/FlagFtbl/Rugby.... SM
 Track: Running SM
 Weight Training I SM
 Weight Training II SM
 Lifeguarding SM
 Dance I SM
 Dance II SM
 Dance III SM
 Dance Technique SM
 AT Kinesiology SM

Health/Wellness

Body Systems SM
 Safety/First Aid SM
 Nutrition/Fitness SM
 Life Skills SM

Quest

Students in Quest have their own academic program.

Learning Support

Learning Support YR
 RLA Lab YR
Permission/assessment is required for these courses.

Flexible Learning Options

Summer Semester@SAS ... SM
 Global Online Academy ... SM
 School Year Abroad YR

APPENDIX III: FOUR-YEAR PLANNING CHART

Department	Grade 9	Grade 10	Grade 11	Grade 12	To Graduate	College Recom'd	Total Earned
English					4	4	
Math					2	4	
Science	Biology				2	3-4	
Soc Studies					2	3-4	
US citizens and Univ of California applicants are required to complete a US History course.							
Language					Intermediate	3-4	
V/P Arts					1	1	
University of California requires one credit or two semesters in the same type of V/P art.							
PE					1.5		
Health					0.5		
		Required in 10th					
				Catalyst Project (Class of 2018)			

Minimum Total Credits for Graduation = 24

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