



## **ACADEMIC CATALOG**

**2018-2019**

### **COUNSELING DEPARTMENT:**

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Mrs. Mendoza: 12<sup>th</sup> Grade Academic Counselor & College Counselor

Mr. Vivar: 10<sup>th</sup> Grade Academic Counselor

Ms. Mejia: 9<sup>th</sup> Grade Academic Counselor & College and Career Advisory

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

# WELCOME

Welcome to the Synergy Academies Family! Synergy is committed to the goal of providing each student with every opportunity to develop his/her capabilities to the fullest extent possible. In order to make this happen, Synergy believes that all members of the school community have a responsibility to help all students succeed academically and in life skills. This Academic Catalog outlines our academic program and course offerings to help support all students in achieving the school's mission and vision.

## MISSION AND VISION

The Mission of Synergy Academies **is to create and share solutions that eliminate the achievement gap.** Synergy creates and shares solutions through the operation of urban public charter schools in South Los Angeles that implement a holistic approach to education, believe in collective accountability, and share best practices through professional collaboration.

Our **Vision** is to create model STEM schools that will empower students to be the next generation of problem solvers. At Synergy, we implement STEM using an integrated approach infusing a problem solving mindset throughout the curriculum in all subjects. We also have a specific focus on each of the following four subjects: Science, Technology, Engineering, and Math.

## COUNSELING DEPARTMENT MISSION AND VISION

To serve as student advocates who support students throughout their high school career, and help students prepare for their post-secondary plans. We provide a comprehensive School Counseling program to facilitate their academic, career, social and emotional development.

### School Counseling Services:

- Academic/College/Career Planning Guidance
- Personal/ Socio-emotional Counseling
- Course Scheduling, academic advising for credit recovery and academic programs
- Individual/Family/School Crisis Intervention
- Community Referrals
- Academic Intervention Support
- Parent Support

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# GRADUATION REQUIREMENTS INFORMATION

## Synergy Quantum Academy Graduation Requirements & Course Sequence (Effective with the Class of 2018)

160 Core Classes    20 College Prep Electives    20 Eng/Tech Electives    40 Synergy Electives

Subject Requirement	Synergy Graduation Requirement	UC/CSU Admission Requirement
<b>History/Social Sciences - A</b>	3 years – 30 credits	2 years
	World History – 10 <sup>th</sup> US History – 11 <sup>th</sup> Government & Economics – 12 <sup>th</sup>	1 year World History 1 year U.S. History or one-half year U.S. History and on-half year of Government
<b>English – B</b>	4 years – 40 credits	4 years
	English 1 English 2 English 3 English 4	English 1 English 2 English 3 English 4
<b>Mathematics – C</b>	3 years – 30 credits	3 years (4 recommended)
	Algebra 1 Geometry Algebra 2 or Advanced Math Course	Algebra 1 Geometry Algebra 2
<b>Science – D</b>	3 years - 30 credits	2 years (3 recommended)
	Biology Chemistry Physics or Advanced Science Course	1 Life 1 Physical
<b>Language other than English – E</b>	2 years – 20 credits	2 years (3 recommended)
	Spanish 1 Spanish 2 Spanish 3 or AP Spanish Language	2 years in a Single language
<b>Visual &amp; Performing Arts – F</b>	1 year – 10 credits	1 year
	Music Appreciation or Choir or Computer Digital Design	
<b>College Prep Elective – G</b>	2 year – 20 credits	1 year (must fall within A-F)
	Geography Art History or Any additional year of an A-F course	
<b>Engineering/ Technology</b>	20 credits	Not Required by UC or CSU.
	Intro to Engineering Design Engineering your World Exploring Computers Intro. to Computer Science	
<b>Synergy Electives</b>	40 credits	Not Required by UC or CSU.
<b>Community Service</b>	40 hours	Not Required by UC or CSU.
<b>Credits</b>	<b>240 units</b>	

\*In order to provide a more rigorous and competitive high school program, please note that Synergy Quantum Academy has more graduation requirements than LAUSD's high schools. Students who fail a course required for graduation must repeat and pass that course. To obtain a high school diploma from SQA, students are generally required to meet the course and grade units established in the SQA Charter Petition.

## **CREDITS TO PROMOTE POLICY**

At the high school level, promotion to the next grade level depends on the credits earned. Students who do not make satisfactory progress each year are at risk of either not graduating on time or not graduating at all.

### **FALL PROMOTIONS**

Grade level promotions are to be made at the beginning of the fall semester once summer school/intersession course credits have been confirmed. All grade level promotions are to be completed by the fall semester norm day. All current courses at Synergy Quantum Academy are worth five credits per semester, except for enrollment in the Fuel Education credit recovery support class period (No credit given). A full course load is 7 classes per year (70 credits per year). **Students must earn the credits listed below in order to promote to the next grade level at the beginning of the academic year.**

**End of 9<sup>th</sup> grade year – 60 credits**

**End of 10<sup>th</sup> grade year – 120 credits**

**End of 11<sup>th</sup> grade year – 180 credits**

**End of 12<sup>th</sup> grade year – 240 credits**

### **MID-YEAR SPRING PROMOTIONS**

Students who did not meet the minimum required credits at the beginning of the year, may be considered for a mid-year spring promotion if they earn the credits listed below by the end of the fall semester.

**End of 9<sup>th</sup> grade fall semester- 90 credits**

**End of 10<sup>th</sup> grade fall semester- 150 credits**

**End of 11<sup>th</sup> grade fall semester- 210 credits**

Senior students who have not earned the minimum credits required for promotion at the beginning of the Spring Semester, may still be eligible for promotion at the end of each grading period if they have earned the required 210 credits, are passing the courses required for graduation and completed any additional graduation requirement due at the time, such as community service hours.

\*Students with disabilities working toward a diploma are required to meet the same graduation/promotion standards as their non-disabled peers. Individualized Education Program (IEP) teams will develop accommodations and modifications needed by the student to successfully access the curriculum.



# SYNERGY QUANTUM ACADEMY

## ACADEMIC GRADING SCALE

Percentage Range	Letter Grade	Grade Points	Class Rank
95-100%	A	4.0	Honor Roll A
90-94%	A-	3.7	Honor Roll A
87-89%	B+	3.3	Honor Roll B
84-86%	B	3.0	Honor Roll B
80-83%	B-	2.7	
77-79%	C+	2.3	
74-76%	C	2.0	
70-73%	C-	1.7	
	D+	1.3	
	D	1	
	D-	0.7	
0-69%	F	0	

Synergy Quantum Academy high school graduation requirements are aligned with the A-G undergraduate admissions requirements. In order to satisfy the A-G requirements, students must pass all of their classes with a letter grade of a “C” or better. The University of California (UC) colleges such as UCLA and UC Berkeley will not admit students with high school grades of D or F. **In an effort to promote college eligibility, beginning with the class of 2016, Synergy Quantum Academy will no longer assign a letter grade of a “D”.** To receive course credit, students must earn passing grades of an “A”, “B” or “C”. Students who do not earn a passing grade are required to retake the course to earn credit.

## SAMPLE FOUR-YEAR HIGH SCHOOL COURSE SEQUENC EDUCATIONAL PLAN

9 <sup>th</sup> Grade Requirements Semester	1 <sup>st</sup>	9 <sup>th</sup> Grade Requirements Semester	2nd
English 9 or Honors English 9		English 9 or Honors English 9	
Math (Algebra 1 or Geometry)		Math (Algebra 1 or Geometry)	
Science (Integrated Science or H. Biology)		Science (Integrated Science or H. Biology)	
Technology or Engineering		Technology or Engineering	
College Prep or Fine Art Elective		College Prep or Fine Art Elective	
Language (Spanish) or Academic Support		Language (Spanish) or Academic Support	
Synergy Electives (Health, PE, etc.)		Synergy Electives (Health, PE, etc.)	
10 <sup>th</sup> Grade Requirements Semester	1 <sup>st</sup>	10 <sup>th</sup> Grade Requirements Semester	2nd
English 10 or Honors English 10		English 10 or Honors English 10	
Math (Geometry or Algebra 2)		Math (Geometry or Algebra 2)	
World History or Honors World History		World History or Honors World History	
Science: Biology or Chemistry		Science: Biology or Chemistry	
Technology or Engineering		Technology or Engineering	
Language (Spanish)		Language (Spanish)	
Synergy Electives (Health, PE, etc.)		Synergy Electives (Health, PE, etc.)	
11 <sup>th</sup> Grade Requirements	1 <sup>st</sup> Semester	11 <sup>th</sup> Grade Requirements	2nd Semester
English 11 or AP Eng. Lang		English 11 or AP Eng. Lang	
Math (Algebra 2 or Adv. Math)		Math (Algebra 2 or Adv. Math)	
US History or AP US History		US History or AP US History	
Science: Chemistry, Physics, Adv. Science		Science: Chemistry, Physics, Adv. Science	
Technology or Engineering		Technology or Engineering	
Language (Spanish)		Language (Spanish)	
Synergy/ College Prep/ Fine Art Elective		Synergy/ College Prep/ Fine Art Elective	
12 <sup>th</sup> Grade Requirements	1 <sup>st</sup> Semester	12 <sup>th</sup> Grade Requirements	2nd Semester
English 12 or AP Eng. Lit.		English 12 or AP Eng. Lit.	
Government/Economics or AP Govt/ Econ		Government/Economics or AP Govt/ Econ	
Math (Algebra 2 or Adv. Math)		Math (Algebra 2 or Adv. Math)	
Science: Physics or Advance Science Course		Science: Physics or Advance Science Course	
Synergy/ College Prep/ Fine Art Elective		Synergy/ College Prep/ Fine Art Elective	
Synergy/ College Prep/ Fine Art Elective		Synergy/ College Prep/ Fine Art Elective	
Synergy/ College Prep/ Fine Art Elective		Synergy/ College Prep/ Fine Art Elective	

\* **Synergy Electives:** Students will be given the opportunity to choose from the available electives.

**Honor & AP Courses:** \*\* To be enrolled in any Honor and/or AP courses, students must request the AP course, satisfy the pre-requisites and/or petition to be enrolled in an Honors/AP course.

Note: Some courses require completion of pre-requisite.

# ACADEMIC POLICIES

## **REPEATED COURSES**

Students may not repeat a course for credit that has been previously passed unless the student is making-up a grade deficiency of a “D” letter mark from a prior school but no additional credits will be granted.

## **PLANNING YOUR PROGRAM**

As a high school student, the choices you make about your program of study will be very important to you now and in the future. Your high school experiences may have an effect upon your choice of careers, your recreational interests, and your entire lifestyle. Consider your interests and abilities, consult with your parents, talk with a counselor, and then carefully plan your four-year high school program.

## **CLASS SCHEDULE ASSIGNMENT**

The master schedule of classes for the school is carefully balanced on student requests made in the spring and cannot be modified for individual needs. Courses are assigned based on grade level course sequence, prior academic history (passing/failing courses), course/credit needs and the course preference selections on the Google survey completed by the student. If students have passed all of their courses, they will be assigned the next course in the sequence per their preference selection. However, if they have failed any course(s) in the past and have not made them up as of yet, they will be placed in the failed course to make-up the course credits

## **CLASS SCHEDULE CORRECTIONS**

Students are expected to keep their classes as scheduled. However, student requests for schedule corrections are honored for the following reasons only and must be completed within the first two weeks of the semester:

1. Specific grade level graduation requirements omitted from schedule
2. Given a course already passed/completed
3. Prerequisite met/not met
4. Addition or deletion of specialized programs (sports, choir, ASB, Aventa, etc.)
5. Submission & Approval of an Honors/AP Petition

Requests for certain teachers, to be with friends, or for specific periods CANNOT be considered. Students may submit a CLASS CHANGE REQUEST form within the first two-weeks of the semester. Submitting a class change request form does not guarantee a class change as it is based on class period availability, total enrolment availability, grade level restrictions and satisfaction of pre-req criteria.

## **MID-YEAR CLASS CHANGE REQUESTS**

If at the end of the semester, a student who is failing a particular course, with teacher and administration approval, can move from higher to lower levels (for example, “honors” to “regular” classes), but not out of the subject area. The change of class will take effect the following spring semester.



# HONORS/AP PROGRAMS

## Expectations of Honors/AP Students

Honors and Advanced Placement courses offer students the opportunity to do college-level work while still in high school. These classes move more quickly, require a good academic background, strong work ethic and allow the individual student to achieve his or her highest academic potential. These students demonstrate maturity and readiness for college, willingness to push themselves to the limit and emphasize their commitment to academic excellence.

## Honors/AP Course Enrollment Policy

All students interested in taking Honors or AP courses must have indicated an interest in taking the course(s) on the course selection survey completed in the spring semester. Completing the survey does not guarantee entry into the course. Courses are assigned based on student interest, completion of the course pre-requisite criteria and GPA minimum requirements (Detailed information about pre-requisite information is available in our Course Descriptions). Your counselor will review your course request, completion of pre-requisite criteria and GPA. If students were not enrolled in a Honor/AP course and would like to petition enrollment to the Honors/AP committee, they must submit the Honors/AP Petition form along with a personal statement and a teacher letter of recommendation. The Honors/AP Committee will meet with the student to review the petition and make a final decision regarding course placement.

## HONORS COURSES

Honors classes serve the industrious and motivated student. These classes move more quickly, require a good academic background, and allow the individual student to achieve his or her highest potential growth. Honors courses may receive weighted grades if A-G approved.

### **Synergy Quantum Academy currently offers the following Honors Courses:**

Honors English 9 (Internal Honors course only, not weighted)  
Honors Biology \*  
Honors Chemistry \*  
Honors English 10\*  
Honors World History\*

## ADVANCED PLACEMENT

Advanced Placement courses offer the honors students the opportunity to do college-level work while still in high school. Upon completion of an AP course, students must take the nationally administered examination in May. College credit may be awarded if the student earns an acceptable grade on this exam. AP courses also receive weighted grades if A-G. For AP courses, a minimum GPA of 3.3 is required in addition to meeting the pre-requisite criteria. Students who do not meet the pre-requisite criteria and GPA may submit a petition.

### **Synergy Quantum Academy currently offers the following AP Courses:**

AP English Language*	AP United States History*
AP English Literature*	AP Government*
AP Calculus*	AP Spanish Language*
AP Biology*	AP World History*

(\* Denotes these courses are A-G approved for the 2017-2018 academic year and are assigned weight)

## **OTHER ACADEMIC INFORMATION**

### **CREDITS**

Five credits are earned for each semester class taken and passed with a letter grade of C- or better.

### **CREDIT RECOVERY**

Students who are credit deficient may earn additional credits by enrolling in a credit recovery program concurrently during the year or in the summer, such as adult school, online courses or community college. Students must obtain a "Concurrent student enrollment permit" signed form from their counselor prior to registering at an Adult school or credit recovery program. Courses and the Credit Recovery program must be accredited and A-G approved.

### **COMMUNITY COLLEGE CONCURRENT ENROLLMENT**

Students have the opportunity to enroll in classes at any Community College such as Los Angeles Trade-Tech. Dual enrollment provides students the opportunity to concurrently enroll in college courses while still in high school. The purpose of dual enrollment is to provide advanced scholastic and educational enrichment opportunities for students. Students who desire to participate in concurrent enrollment must receive approval by their academic counselor or principal given that the student has maintained good academic standing or if the course is needed for remediation due to credit/course deficiencies. The student must meet with his/her counselor to complete the form and select the appropriate course from the "Eligible Courses for Concurrent Enrollment" list provided by the Community College. Parental permission is also required in order to complete the registration form. Courses completed may be added to the student's high school transcript and GPA calculation. It is the student's responsibility to submit a sealed transcript to the high school registrar to receive high school credit for CC courses. Students may not earn double credit for courses already passed at the high school level.

### **TRANSCRIPT**

The transcript is a student's permanent record. Students/ Parents may request official copies of transcripts in the main office, a 24 hour turn around time is needed to process request.

### **LETTERS OF RECOMMENDATION REQUESTS**

When requesting a letter of recommendation, make sure to provide your recommender the necessary information (program name, due date, etc) along with a brag sheet. It is especially important that you give me as much advance notice as possible, usually at least two-weeks is required.

### **TUTORING HOURS**

Tutoring is offered after-school by most teachers; see schedule for specific tutoring hours/dates.

# ACADEMIC CATALOG/ COURSE DESCRIPTIONS

## ENGLISH DEPARTMENT

The English program at Synergy Quantum Academy is thoughtfully designed to support students in their acquisition and extension of reading, writing, speaking, and listening competencies. During the ninth and tenth grade there is an emphasis on the fundamentals of these skills at a high school level in order to develop a seamless transition into the art of English in the eleventh and twelfth grades. The program is aligned with the California Common Core State Standards. The curriculum is literature and nonfiction based and requires intensive reading, writing, speaking, and listening skills. Short stories, plays, novels, poetry, essays, and other forms of nonfiction will be used to broaden students analytically and creatively so that they are prepared for real world applications of their abilities.

### **Possible Career Objectives for the Student with English Training:**

Advertising Copywriter	Broadcaster	Writing Consultant Business
Administrator	Clergy, Minister	Writer
Columnist/Journalist	Court Reporter	Technical Writer
Data Entry Operator	Editor/Evaluator	Teacher
Law Enforcement	Officer Lawyer	Speech Writer
Legal Assistant Newscaster	Playwright	Secretary
Payroll Clerk	Politician	Screenwriter
Public Relations Officer	Public Service Worker	Salesperson
Publisher	Record Keeper	

### **English 9 A/B**

#### **Grade 9**

**Course Length: 1 Year**

**Credits: 10**

**UC A-G approved (English)**

**Prerequisite: None**

#### **Course Description:**

English 9 is a challenging, literature-based course aligned with the California Standards. Designed to begin students for the preparation of college-level reading and writing, this course emphasizes development of the following skills: reading comprehension, vocabulary development, including root words and acquisition of SAT content area vocabulary response to and analysis of literature, formal writing skills, including clarity and concision within various essay structures, and active speaking and listening strategies. Students will read a variety of genres and analyze texts through historical context, themes, literary devices and rhetorical devices. They will produce a variety of written work, including reflective reading journals, scripts, autobiographical pieces, research, persuasive, analytic, and compare and contrast essays.

## **Honors English 9 A/B**

**Grade 9**

**Course Length: 1 Year**

**Credits: 10**

**UC A-G Approved (Not weighted)**

**Prerequisite:** B+ in both semesters of English 8 & 3.0 GPA

**Course Description:**

Honors English 9 is a challenging, course aligned with the California Common Core standards. The course is designed to begin to prepare students for college-level reading and writing. In addition, this course emphasizes the development of the following skills: reading comprehension, literary analysis, critical thinking, vocabulary development, including root words and acquisition of SAT content area vocabulary, response to and analysis of literature, formal writing skills, including clarity and conciseness within various essay structures, and active speaking and listening strategies. Students will read a variety of genres and analyze texts through historical context, themes, literary devices and rhetorical devices. They will produce a variety of written work, including reflective reading journals, scripts, autobiographical pieces, research, persuasive, analytic, and compare and contrast essays.

## **English 10 A/B**

**Grade 10**

**Course Length: 1 Year**

**Credits: 10**

**UC A-G approved (English)**

**Prerequisite:** Grade of "C-" or better in previous English courses.

**Course Description:**

English II is a rigorous college preparatory course designed to continue preparing students for college. Students will read novels, shorts stories, dramas, poetry, and nonfiction to analyze literature in terms of theme, literary devices, author's point of view, and rhetorical devices. They will draw inferences, understand historical influence, and evaluate aesthetic qualities of style. They will expand their vocabulary and listening and speaking skills within the context of literature. They will demonstrate research techniques and an ability to write with an understanding of audience and purpose. Throughout the year, they will produce a variety of writings including reading journals, character studies, speeches, creative pieces, compare and contrast, analytical, expository, narrative, reflective, persuasive and research essays.

## **Honors English 10 A/B**

**Grade 10**

**Course Length: 1 Year**

**Credits: 10**

**UC A-G Approved (Weighted, effective with the 2015-2016 academic year)**

**Prerequisite:**

\*Students must have a cumulative High School GPA of 3.0 or higher

\* Students must have received a "B" in both semester of Honors English 9 or

\*Students must have received an “A-” in both semesters of English 9

\*Students must request the course at the conclusion of their freshman year

**Course Description:**

Honors English 10 is a rigorous college preparatory course designed to prepare students for AP and college courses using the California Common Core Standards. Students will read novels, shorts stories, dramas, poetry, and nonfiction to analyze literature in terms of theme, literary devices, author’s point of view, and rhetorical devices. They will draw inferences, understand historical influence, and evaluate aesthetic qualities of style. They will expand their vocabulary and listening and speaking skills within the context of literature. They will demonstrate research techniques and an ability to write with an understanding of audience and purpose. Throughout the year, they will produce a variety of writings including reading journals, character studies, speeches, debates, creative pieces, compare and contrast, analytical, expository, narrative, reflective, persuasive and research essays.

## **English 11 A/B**

**Grade 11**

**Course Length: 1 Year**

**Credits: 10**

**UC A-G approved (English)**

**Prerequisite:** Grade of “C-“ or better in previous English courses.

**Course Description:**

The English Language Arts course for eleventh grade is dedicated to the study of American literature from the colonial period to the late twentieth century. Because much of the early American literature is nonfiction (e.g. diaries, letters, sermons, almanacs, speeches, and foundational documents), there are many opportunities to analyze historical and informational texts. Students will be able to visualize—and appreciate—the fluid relationship between fiction and nonfiction. Throughout the year, students will have several opportunities to establish connections between literature and history, art, and other subjects. Writing assignments will consist of both creative and analytical essays, where they compare the treatment of a given theme in works from varying genres. Building on their writing skills from previous years, students will become acclimated to the integration of multiple sources and perspectives into their work, reading literary criticism, and constructing longer, more complex essays. To build appreciation for the sounds and cadences of American literature, students will continue to recite poems and speeches—and refine their expressive delivery. By the end of the year, students will have a solid foundation in American literature, and will be ready to branch out into European literature, which they study in English 12.

## **Honors English 11 A/B: (Course is archived for this school year)**

**Grade 11**

**Course Length: 1 Year**

**Credits: 10**

**UC A-G Approved (Weighted, English)**

**Prerequisite:**

- \*Students must have a cumulative High School GPA of 3.0 or higher
- \* Students must have received a “B-“ in both semester of Honors English 10 or
- \*Students must have received an “A” in both semesters of English 10
- \*Students must request the course at the conclusion of their sophomore year

**Course Description:**

The Honors 11 course is dedicated to the study of American literature from the colonial period to the late twentieth century. This course is designed to rigorously develop critical thinking throughout the course with engagement in writing assignments, reading, interaction with peers, and public speaking. Because much of the early American literature is nonfiction (e.g. diaries, letters, sermons, almanacs, speeches, and foundational documents), there are many opportunities to analyze historical and informational texts. Through poetry, novels, short stories, non-fiction pieces, and plays, students will have ample opportunities to analyze literature throughout the course with critical thought. Throughout the year, students will have several opportunities to establish connections between literature and history, art, and other subjects. Writing assignments will consist of both creative and analytical essays, where they compare the treatment of a given theme in works from varying genres. With the study of non-fiction works, students will create a 5-10 research paper that will stand firm on the side of an issue. Students will become acclimated to the integration of multiple sources and perspectives into their work, reading literary criticism, and constructing longer, more complex essays. To build appreciation for the sounds and cadences of American literature, students will continue to recite poems and speeches—and refine their expressive delivery. By the end of the year, students will have a solid foundation in American literature, and will be ready to branch out into European literature, which they study in English 12.

**AP English Language**

**Grade 11**

**Course Length: 1 Year**

**Credits: 10**

**UC A-G Approved (Weighted, effective with the 2014-2015 academic year)**

**Prerequisite:**

- \*Students must have a cumulative High School GPA of 3.0 or higher
- \*Students must have completed H. English 10AB with a B- or higher for both semesters or an A- in regular English 10AB.
- \*Students must request the course at the conclusion of their sophomore year

**Course Description:**

AP English Language and Composition is a college-level English course. The purpose of this course is to help students “write effectively and confidently in their college courses across the curriculum and in their professional and personal lives.” (The College Board, AP® English Course Description, p. 6) The course is organized according to the requirements and guidelines of the current AP English Course Description, and, therefore, students are expected to read critically, think analytically, and communicate clearly in both writing and speech.

## **CSU ERWC (English 12)**

**Grade 12**

**Course Length: 1 Year**

**Credits: 10**

**UC A-G Approved (English)**

**Prerequisite:** Grade of "C-" or better in previous English courses.

**Course Description:**

English 12 is a rigorous college preparatory course designed to continue preparing students for college. Students will read novels, shorts stories, drama, poetry, and nonfiction to analyze literature in terms of theme, rhetorical devices, and author's purpose. They will draw inferences, understand historical influence, and consider the author's political and philosophical stance. They will expand their vocabulary and listening and speaking skills within the context of literature. They will demonstrate research techniques and an ability to write with an understanding of audience and purpose. Throughout the year, they will produce a variety of writings including reading journals, character studies, speeches, creative pieces, and compare and contrast, analytical, expository, narrative, reflective, persuasive and research essays.

## **AP English Literature and Composition**

**Grade 12**

**Course Length: 1 Year**

**Credits: 10**

**UC A-G Approved (Weighted, English)**

**Prerequisites:**

\*Students must have a cumulative High School GPA of 3.0 or higher

\*Students must have received a B in regular English 11AB.

\*Students must request the course at the conclusion of their junior year

**Course Description:**

The AP English Literature Writing Course is designed and taught thematically with an emphasis on archetypal core readings and more modern selections that illuminate and expand upon the themes. The AP English Literature and Writing course closely follows the curricular requirements described in the AP Course Description including the fundamentals of literary analysis and beginning level college composition. Each week students will discuss modes of writing including interpretation, analysis, rhetorical strategies, exposition, structure, and style. Students will read a great deal of classic, sophisticated world literature from sixteenth century to contemporary times. We will use the Prentice Hall Literature-The British Tradition (New Jersey: Pearson Education, 2002) anthology as well as the Perrine's Literature-Structure, Sound and Sense (Arp and Johnson, eds. New York: Harcourt 2012). Many novels, plays, and numerous poems will be studied as well. The course will concentrate on the experiences of literature, the interpretation of literature, the evaluation of literature, and writing to develop stylistic maturity.

## **HISTORY/ SOCIAL SCIENCE DEPARTMENT**

The social studies curriculum is designed to provide each student with the knowledge and skills necessary to meet the needs of a contemporary society. Information about the past and its relation to the present is essential if the individual today is to understand the nature and direction of society. Moreover, the problem-solving and decision-making activities that dominate society and the individual's life require that the student develop a wide range of critical thinking skills. The courses provided by the social studies department are structured to meet these objectives.

### **Possible Career Objectives for the Student with Social Studies Training**

Economist	Politician	Psychologist
Public Service Worker	Historian	Social Worker
Sociologist	Teacher	Librarian
Explorer	Geographer	Lawyer
Newscaster	Political analyst	

### **Big History/Humanities**

**Grade 9**

**Course Length: 1 Year**

**Credits: 10**

**UC A-G Approved ( History)**

**Prerequisite: None**

**Course Description:**

How did the Universe begin? Are humans still evolving? What does the future hold? Big History takes on these questions, which originate with the dawn of time, and gives students a framework to tell the story of humanity's place in the Universe. This course is more than just your standard world history class. Big History helps students see the overall picture and make sense of the pieces: it looks at the past from the Big Bang to modernity, seeking out common themes and patterns that can help us better understand people, civilizations, and the world we live in.

### **World History**

**Grade 10**

**Course Length: 1 Year**

**Credits: 10**

**UC A-G Approved (History)**

**Prerequisite: None**

**Course Description:**

Students in grade ten study the major turning points that shaped the modern world, from the late eighteenth century to the present. We will examine the expansion of the West and the growing interdependence of people and cultures throughout the world. We will also examine current events and how the world's past greatly impacts us today.



## **Honors World History**

**Grade 10**

**Course Length: 1 Year**

**Credits: 10**

**UC A-G Approved (Weighted, effective with the 2014-2015 academic year)**

**Prerequisite:**

\*Students must have a cumulative High School GPA of 3.0 or higher

\*Students must have received an B- or higher in Honors English 9 or a B in regular English 9 for both semesters.

\*Students must request the course at the conclusion of their freshman year

**Course Description:**

Honors World History is a more rigorous and advanced version of the same course offered at other high schools and required by the A-G. This course is designed to prepare students for placement in the AP course in the 11<sup>th</sup> grade. To prepare, students will analyze primary sources with much more depth and will complete many more writing assignments including 5 paragraph essays and DBQs (Document Based Questions), as well as cover much more content than the regular world history course. Students study the major turning points that shaped the modern world, from the late eighteenth century to the present. We will examine the expansion of the West and the growing interdependence of people and cultures throughout the world.

## **AP World History**

**Grade 10**

**Course Length: 1 Year**

**Credits: 10**

**UC A-G Approved (Weighted, effective with the 2018-2019 academic year)**

**Prerequisite:**

\*Students must have a cumulative High School GPA of 3.0 or higher

\*Students must have received an B or higher in Honors English 9 or an A- in regular English 9 for both semesters.

\*Students must request the course at the conclusion of their freshman year

**Course Description:**

World History requires the development of thinking skills using the processes and tools that historians employ in order to create historical narrative. Students will also be required to think on many different geographical and temporal scales in order to compare historical events over time and space. Advanced Placement (AP) World History is structured around the investigation of five themes woven into 19 key concepts covering six distinct chronological periods. History is a sophisticated quest for meaning about the past, beyond the effort to collect and memorize information. This course will continue to deal with the facts—names, chronology, and events—but it will also emphasize historical analysis.

## **U.S. History**

**Grade 11**

**Course Length: 1 Year**

**Credits: 10**

**UC A-G Approved (History)**

**Prerequisite:** Grade of "C-" or better in previous World History class.

### **Course Description:**

This course introduces students to the history of the United States from its founding to the present day. Students will study the events, ideas, people and movements that have shaped United States government, culture, institutions and national identity over the past 250 years, with particular emphasis on the history of the twentieth century. The course will begin with a review of the history of the colonial era, war for independence, and writing of the Constitution, including a renewed focus on how Enlightenment ideals drove both the quest for independence, and the drafting of the world's most enduring legal framework, the Constitution. Students will also review sectionalism, the Civil War and Reconstruction, juxtaposing those events with America's founding ideals, and the often vexing intersection of natural rights and regional interests and prejudices. Students will then turn their attention to the industrialization, urbanization and westward expansion that characterize the Gilded Age, with its attendant tensions related to immigration, Manifest Destiny, distribution of wealth, and corrupt politics. Students will further study how the United States' desire to grow and develop its industrial economy lead to imperialistic policies and an increasingly important role on the world stage.

Students will analyze how Gilded Age politics and policies engender reform movements like the Progressive Era at home, and push the United States into World War I abroad. Students will then consider how the events and consequences of World War I encouraged the explosion of consumerist culture, and prompted a reexamination of American values at home during the 1920s, and how those shifts in the American economy and culture contributed to both the hardships of the Great Depression, and American resilience and resurgence in the wake of the New Deal and World War II. Finally, students will study the United States in the Post World War II Era, with particular focus on how the Cold War shaped foreign policy for 50 years, while tensions which had long simmered with regard to race, class, gender, sexual orientation and other types of discrimination come to the forefront of the domestic agenda.

## **A.P. United States History**

**Grade 11**

**Course Length: 1 Year**

**Credits: 10**

**UC A-G Approved (Weighted, English)**

### **Prerequisites:**

\*Students must have a cumulative High School GPA of 3.0 or higher

\*Students must have received an B- or higher in Honors World History or an A- in regular WHG both semesters.

\*Students must request the course at the conclusion of their sophomore year

**Course Description:**

The goal of the A.P. United States History class (APUSH) is to create an academic environment in which students will demonstrate a mastery of understanding of key events, trends and developments in American History from 1607 to the present. In order to accomplish this, students must connect the larger themes of the course - diversity, identity, culture, economic and social change, reform, religion, and the U.S. on the global stage- to the context and content of each successive chronological unit. Students will also differentiate between and among various schools of historical thought and interpretation as well as interpret and draw conclusions from various pieces of historical data including primary and secondary sources, literature, art, music, political cartoons, graphics and others. Additionally, students will build and refine their ability to analyze and interpret historical information, recognizing the significance of the social, political or cultural origin of the source material, and the purpose behind its creation as well as develop their critical writing skills, beginning with their ability to generate a strong, effective thesis statement, and culminating in the capacity to successfully execute an historical essay that demonstrates a mastery of the content, a synthesis of key ideas, themes and events, and that uses evidence effectively in order to support the thesis. Finally, to accomplish the goals listed above, students must work collaboratively in groups to solve problems, generate products or analyses, complete presentations, and successfully initiate and maintain a discussion. At the class's conclusion, students should be prepared for and receive a grade of 3 or higher on the AP U.S. History Exam.

**Government****Grade 11****Course Length: 1 Semester****Credits: 5****UC A-G Approved (History)****Prerequisites:** Grade of "C-" or better in previous history courses.**Course Description:**

As students prepare to enter the world after high school, this course will help them find their civic voice. It is designed to provide students with practical knowledge and understanding of American government and how it's connected to their lives. Students will apply knowledge of the US Constitution and demonstrate understanding of how American government functions at local, state and national levels, as well as its impact on individual citizens.

**AP U.S. Government and Politics****Grade 12****Course Length: 1 year****Credits: 5****UC A-G Approved (Weighted, History)****Course Length: 1 Year****Prerequisites:**

\*Students must have a cumulative High School GPA of 3.0 or higher

\*Students must have received a B or higher in APUSH or an A- in US History both semesters

\*Students must request the course at the conclusion of their junior year

**Course Description:**

Students in AP U.S. Government and Politics will pursue a deeper understanding of the institutions of American government. They will analyze the foundational principles and changing interpretations of the Declaration of Independence, the Constitution, and the Bill of Rights. Students will also study the functions of the executive, legislative and judicial branches of government, with a critical eye toward the tensions created by our system of checks and balances. An emphasis is placed on analyzing the relationship among federal, state, and local governments, with particular attention paid to important historical documents and case studies. As students prepare to live, work, vote and participate in American society, their understanding of how institutions of power work becomes increasingly important. In addition to studying government and politics, students will also master fundamental economic concepts, applying tools from other subject areas to the understanding of operations and institutions of economic systems. The class will cover the basic economic principles of micro/macroeconomics, international economics, comparative economic systems, and methods of economic analysis. Students will analyze how people, businesses, and government use resources to meet endless wants and needs.

**Economics****Grade 12****Course Length: 1 Semester****Credits: 5****UC A-G Approved (G- College Prep Elective)****Prerequisites:** Grade of "C-" or better in previous history courses.**Course Description:**

This course is the second half of a two-part evaluation of the distinguishing features of American history: that of American government and economics. Economics is briefly covered in the first semester as it relates to forms of government and their corresponding economic systems, as well as the economic relation to political participation, behavior, and American foreign policy. It is introduced in full during the second semester and examines 6 units: economic fundamentals, how markets work, economic institutions, personal finance and business planning, government and the economy, and the global economy. Students will analyze the principles and key terminology of economics to understand how people, businesses, and government make fiscal decisions and how those decisions have corresponding effects. Students will explore how society organizes and distributes limited resources to satisfy unlimited wants. Students will examine market components such as price, competition, business, and banking institutions. With the knowledge of market economies and financial institutions, students will participate in hands-on activities surrounding personal finance strategies as well as entrepreneurship, business administration and marketing. With this experience students will evaluate national economic activity: money supply, inflation, recession, depression, the Gross Domestic Product and economic growth, as well as economic indicators, which in turn effect the personal economic decisions. Finally students will evaluate the international economy, as it relates to trade, the exchange rate, and the effects of globalization on economic activities like business and employment.

## **Geography (Course is archived this school year)**

**Grade: 9-12<sup>th</sup> grade**

**Course Length: 1 Year**

**Credits: 10**

**UC A-G Approved (G- College Prep Elective)**

**Prerequisites:** Grade of "C-" or better in previous history courses.

### **Course Description:**

The purpose of the Geography course is to develop a greater understanding of the world we live in, who inhabits that world, and how humans interact with, adapt to, and change the world around us. Our main focus areas will include global coordinate systems, mapping, physical geography, physical features, climate data, vegetation maps, population density, economic activity and world cultures. These topics will be covered as we move regionally across the 7 continents. Geography is a high-level course that offers motivated students an opportunity to gain a global perspective that is meaningful and appropriate for living in the world today.

# MATHEMATICS DEPARTMENT

## Department Description:

The mathematics curriculum is designed to benefit all students regardless of field of interest. The program encompasses a complete college and STEM preparatory sequence of classes together with classes designed to bring the student to a satisfactory level of competence in basic mathematical skills. The ultimate goal is to provide each student with the best mathematics education possible, all the while promoting perseverance, collaboration, critical reasoning, and self-sufficiency in solving any problem.

## **Possible Career Objectives for the Student with Mathematics Training:**

Accountant	Actuary	Appraiser
Assessor	Auditor	Banker
Budget Analyst	Business Manager	Computer Programmer
Computer Scientist	Controller	Economist
Engineer	Financial Analyst	Mathematician
Physicist	Statistician	Stock Broker
Systems Analyst	Teacher	

## **Algebra 1 A/B**

**Grade 9-12**

**Course Length: 1 year**

**Credits: 10**

**UC A-G approved**

**Prerequisites:** None

### **Course Description:**

This course is the foundation mathematics course for high school. Students will be asked to use math to make sense of the world through translating word problem to equations, creating diagrams, and making graphs to help them analyze problems. The concept of function is emphasized throughout the course. Topics include: (1) operations with real numbers, (2) linear equations and inequalities, (3) relations and functions, (4) polynomials, (5) algebraic fractions, and (6) nonlinear equations. Each chapter includes word problems and real-life applications while incorporating technology into everyday instruction.

## **Algebra 2 A/B**

**Grade 10-12**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved**

**Prerequisites:** A grade of "C-" or better in Geometry to move to each subsequent course

### **Course Description:**

Algebra 2 is a college preparatory course that expands upon concepts learned in Algebra 1 and Geometry, namely building on the notion of functions and their properties. The first semester includes statistical topics such as identifying and using measures of central tendency,

understanding standard deviation and normal distribution, and notions of probability. Students work with polynomial functions, exponential functions, rational functions, and logarithmic functions. Application problems involving mathematical modeling will be applied throughout the course of study. Topics in analytic geometry, namely conic sections, will be studied in the second semester in order to give students a more complete understanding of how geometric shapes can be analyzed using methods of mathematical analysis. The final section in Algebra 2 is dedicated to Trigonometry.

## **Geometry A/B**

**Grade 10-12**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved**

**Prerequisites:** A grade of “C-” or better in Algebra 1 to move to each subsequent course

**Course Description:**

The Geometry course includes an in-depth analysis of plane, solid, and coordinate geometry as they relate to both abstract mathematical concepts as well as real-world problem situations. Topics include logic and proof, parallel lines and polygons, perimeter and area analysis, volume, similarity, congruence and trigonometry. Emphasis will be placed on developing critical thinking skills as they relate to logical reasoning and argument. Students will be required to use manipulatives and basic geometry tools such as protractors and a compass to find the measure of degrees and to create drawings in relation to the course content.

## **Pre-Calculus A/B**

**Grade 11<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved: Advanced Mathematics**

**Prerequisites:**

\* Algebra 2, and Geometry (Required)

\*A grade of “C-” or better to move to each subsequent course.

**Course Description:**

Pre-Calculus is a college preparatory course designed to prepare students for the study and successful completion of Calculus. Students will build on foundational Geometry and Algebra 2 concepts in a course designed to prepare students for Calculus. The first semester of study will go through trigonometry, namely topics that center around the unit circle and trigonometric functions. Students will develop an understanding of trigonometric functions using algebraic and graphical representations. Students apply properties of trigonometric functions to study polar coordinates. The second semester focuses on mathematical analysis, namely the analysis of functions in the coordinate plane. Students will learn about families of functions and their properties, including transformations, points of intersection, end behavior, domain and range.

## **Trig/ Stats (Course has been archived)**

**Grade: 12th**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved: Advanced Mathematics**

**Prerequisites:**

Algebra 2, Geometry and Pre-Calculus (Required)

\*A grade of "C-" or better to move to each subsequent course.

**Course Description:**

Trig/Stats is a college preparatory math course that combines trigonometry, probability/statistics, and foundational algebraic concepts in order to prepare students for higher-level math courses after high school. This is a senior only course.

## **EAP College Prep Math**

**Grade: 12th**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approval Pending (Currently serves as a Synergy Elective)**

**Prerequisites:**

Algebra 2 or Pre-Calculus (Required)

\*A grade of "C-" or better to move to each subsequent course.

**Course Description:**

The ultimate intent of the EAP Senior Year Mathematics (ESM) Course is to better prepare college and career-bound high school seniors with the 21st Century skills necessary to meet the mathematical thinking and problem-solving expectations of higher education courses and workplace requirements. The goal of the course is to strengthen and extend students' mathematical foundation by deepening conceptual understandings of mathematical theory, skills and strategies. This is accomplished by incorporating the National Common Core Standards for Mathematical Practice and alignment with specific high school content standards listed in the California Common Core State Standards for Mathematics (CCSS-M). The course was developed through a collective impact model that approaches student learning through intersegmental partnership agreements that include Sacramento State University, the local community colleges, county offices of education, and feeder high school districts

## **Calculus A/B**

**Grade 11<sup>th</sup>- 12th**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved: Advanced Mathematics**

**Prerequisites:**

\*Algebra 2, Geometry and Pre-Calculus (Required)

\*A grade of "C-" or better to move to each subsequent course.

**Course Description:**



This course is recommended to all students interested in pursuing studies in Engineering, Computer Science, or Mathematics. The focus of this course is around 3 main topics: limits, derivatives, and integrals. Students will learn limit behavior of functions, how the rate of change of a function can be calculated, and how to approximate and theoretically determine areas under curves and volumes of regions. Conceptual topics in this course will be applied in the form of related rates, optimization, particular solutions to differential equations, and numerical approximations of changed in rate. Students will use TI-NSpire technology to investigate and explore topics in Calculus.

## **AP Calculus A/B**

**Grade 11<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved: Advanced Mathematics (weighted)**

**Prerequisites:**

\*Algebra 2, Geometry and Pre-Calculus (Required)

\*A grade of “B” or better in Pre-Cal.

\*Students must have a cumulative High School GPA of 3.0 or higher

\*Students must request the course at the conclusion of their junior year

**Course Description:**

This is an advanced placement course intended to prepare students to succeed on the AP Calculus AB Exam. This course is recommended to all students interested in pursuing studies in Engineering, Computer Science, or Mathematics. The focus of this course is around 3 main topics: limits, derivatives, and integrals. Students will learn limit behavior of functions, how the rate of change of a function can be calculated, and how to approximate and theoretically determine areas under curves and volumes of regions. Conceptual topics in this course will be applied in the form of related rates, optimization, particular solutions to differential equations, and numerical approximations of changed in rate. Students will use TI-NSpire technology to investigate and explore topics in Calculus. An optional summer boot camp will be provided.

## **AP Statistics A/B (Course is archived this school year)**

**Grade 11<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved: Advanced Mathematics (weighted)**

**Prerequisites:**

\*Algebra 2, Geometry and Pre-Calculus (Required)

\*A grade of “B” or better in Pre-Cal.

\*Students must have a cumulative High School GPA of 3.0 or higher

\*Students must request the course at the conclusion of their junior year

**Course Description:**

In our society, we act as consumers of information on a daily basis; frequently, this information is presented to us in the form of statistics—we see opinion polls in newspapers, success rates for prescription medications, performance data for athletes, recommendations and ratings for movies, etc. Consumers who are able to critically analyze and interpret statistical information

have an advantage in protecting their own interests, and in persuading others. This course is designed to give students the knowledge and skills required to succeed on the AP Statistics test and subsequent courses in mathematics and the social sciences. We will integrate statistical methods and calculations with the use of technology and hands-on experiences to design reliable experiments, accurately interpret data to draw conclusions, assess the validity of claims made based on data, generate and test reasonable hypotheses, and explain random phenomena. Consequently, we will become better consumers of information and explore the world through a different lens. Students will also have the opportunity to earn college credit for successfully completing the course and passing the AP exam, which can give them an advantage at the college of their choice.

## SCIENCE DEPARTMENT

Three years of science are required for high school graduation. For A-G completion, two years must include course work in life science and physical science. Science courses are designed to provide laboratory experiences in the methods of science and to develop an understanding of the biological and physical world. The student develops an understanding and appreciation of the influence of science on modern society. Through laboratory experience, skills in the use of scientific equipment are developed. Through investigation, data are collected to allow interpretation of natural phenomena.

### **Possible Career Objectives for the Student with Science Training:**

Aerospace Engineer	Computer Designer	Mechanical Engineer
Architect	Computer Scientist	Physicist
Astronaut	Dentist	Physical Therapist
Astronomer	Doctor	Pharmacist
Biochemist	Ecologist	Molecular Biologist
Biologist	Electrical Engineer	Nuclear Scientist
Biomedical Engineer	Environmental Engineer	Nurse
Botanist	Environmental Engineer	Paramedic
Geologist	Laboratory Technician	Teacher
Chemical Engineer	Medical Technician	Veterinarian
Chemist	Medical Researcher	Zoologist

### **Integrated Science**

**Grade 9<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved ( Laboratory Science)**

**Prerequisite:** None

#### **Course Description:**

This academic course provides students with an introduction to the earth sciences, physics, chemistry, and biology. The science curriculum in the first year of integrated science emphasizes how Earth is a unique system that supports life by the interaction of matter and energy through dynamic processes. These processes impact the biosphere over time. The standards in Integrated Science 1 present the foundations of physics, chemistry, biology, and earth science. These standards build the knowledge base that prepares the student for the next three years of integrated science or for the traditional Biology, Chemistry, and Physics courses where the rest of the California Science Standards will be addressed. The Integrated Science 1 concepts will be further enhanced by having students perform careful scientific investigations.

This comprehensive view gives the students an understanding of the concepts and principles of science and provides opportunities to develop problem solving, and technological skills necessary to compete successfully in the 21st century.

### **Biology**

**Grade 9<sup>th</sup>-10<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved: Biological Science**

**Prerequisite:** None

This course emphasizes knowledge of concepts, ideas, and material based on the following topics: molecular and cellular parts of living things, structure and function of animals, genetics, evolution, plant and animal diversity, ecology, the relationship among animals and plants with the environment, and basic anatomy and physiology. This class will include the use of basic laboratory equipment, materials, and skills to expand the course content. The role of humans and society on biological systems are included along with connections to other scientific disciplines. Biology is the life science requirement for high school.

## **Honors Biology**

**Grade 9<sup>th</sup>-10<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC approved: Biological Science (Weighted for 10<sup>th</sup> grade students effective 2017-2018)**

**Prerequisite:**

\*Students must have a cumulative High School GPA of 3.0 or higher

\*Students must have received a B or higher in Integrated Science or 8<sup>th</sup> grade Science

\*Students must request the course at the conclusion of their freshman year

**Course Description:**

This is a highly rigorous, in-depth class covering a wide range of biological topics. The topics include an introduction to organic chemistry, ecology, evolution, genetics, cytology, and physiology. Along with classroom instruction the students complete weekly labs and research projects that broaden their understanding of the topics. Upon completion of Honors Biology students will be able to discuss the nature of science and understand what science is and what science is not; Demonstrate the ability to think critically and solve problems by completing inquiry based labs and group projects.

## **AP Biology**

**Grade 10<sup>th</sup>-12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved: Biological Science (Weighted effective 2018-2019)**

**Prerequisite:**

\*Students must have a cumulative High School GPA of 3.0 or higher

\*Students must have received a B- or higher in Biology or Honors Biology

\*Students must request the course at the conclusion of their freshman year

**Course Description:**

The AP Biology course is designed to offer students a solid foundation in introductory college-level biology. By structuring the course around the four big ideas, enduring understandings, and science practices, students develop an appreciation for the study of life and help them identify

and understand unifying principles within a diversified biological world. What we know today about biology is a result of inquiry. Science is a way of knowing. Therefore, the process of inquiry in science and developing critical thinking skills is the most important part of this course. At the end of the course, students will have an awareness of the integration of other sciences in the study of biology, understand how the species to which we belong is similar to, yet different from, other species, and be knowledgeable and responsible citizens in understanding biological issues that could potentially impact their lives.

## **Chemistry**

**Grade 10<sup>th</sup>-12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved (Physical Science)**

**Prerequisite:** Grade of "C-" or better in Algebra 1

**Course Description:**

This laboratory science course introduces students to the study and behavior of matter. Students will learn about the interaction of matter and energy, atomic structure, the periodic table, chemical bonding, chemical equations and reactions, intermolecular forces, the mole, stoichiometry, gas laws, and acids and bases. Students will create models, participate in problem solving, conduct online lab simulations, and laboratory activities. Students will be taught to discover patterns in data, write lab reports, and maintain a laboratory notebook.

## **Honors Chemistry**

**Grade 10<sup>th</sup>-12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved: Approved effective with the 2017-2018 school year (Weighted)**

**Prerequisite:**

\*Students must have a cumulative High School GPA of 3.0 or higher

\*Students must have received an B or higher in Biology or Honors Biology

\*Students must request the course at the conclusion of their freshman year

**Course Description:**

The Honors Chemistry course is a one-year rigorous, laboratory-based course with an emphasis placed on the in-depth study of chemical topics, and involves a more rigorous inquiry and mathematically based study. Students will gain development of the major concepts of matter and the changes which matter undergoes, atomic structure, chemical bonding, chemical reactions, the behavior of solutions, thermodynamics, kinetics, nuclear and organic chemistry. Student learning is enhanced by laboratory experimentation, critical thinking, and problem solving activities. Students complete community-based written research projects, treat aspects of chemistry that require individual research and reporting, and participate in online threaded discussions. Students will engage in weekly lab activities that will reinforce their understanding of the concepts they will be studying. The laboratory component of the course enhances student learning by providing them with techniques that are specific to the principles of chemistry. Technology is infused throughout the curriculum. Technology is infused throughout the curriculum. Furthermore, this course stresses depth over breadth so as to adequately prepare students to take AP Chemistry

the following year of schooling. Therefore, students are pushed to deeply understand the why and how of the processes that are being studied so as to prepare them for the critical thinking skills that are of paramount importance when taking AP Chemistry.

## **Physics**

**Grade 9th- 12th**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved (Physical Science)**

**Prerequisite(s):** Grade of “B+” or better in Math 8 or Algebra I

**Course Description:**

This course is designed to give students the knowledge and skills required to academically succeed in and understand physics in the world around them. From electrons in our body interacting with our world (e.g. perhaps when you get shocked) to the orbits of planets in our solar system, physics touches every aspect of our lives. We will cover units on kinematics, dynamics, momentum, energy, electricity, waves, and much more.

Consequently, we will become better, more conscious critical thinkers in our world. We will question why certain physical phenomena exist.

## **Physiology**

**Grade 11th-12th**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved: Biological Science**

**Prerequisite(s):** Completion of Biology and a Physical Science course with grade “B-“ or better.

**Course Description:**

Physiology is a science course that allows students to look deeper into aspects of the human body, expanding on the concepts studied in biology. Students in this course will explore how the different body systems function, why they function, and how they work together to keep the body in tact; students will also explore diseases and disorders that arise when these systems do not work properly. It is a laboratory course designed for students to build knowledge and interest in the health careers.

## **Astronomy**

**Grade 11th-12th**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approval (College Prep G Elective)**

**Prerequisite(s):**

Completion of Biology and a Physical Science course with grade “C-“ or better.

Completion of Algebra 1 with a “C-“ or better

**Course Description:**

This course will review key topics in astronomy and cosmology. This will include an overview of the night sky, planets, principal visible objects (e.g. Messier). We will also briefly touch on the cultural & scientific significance of our understanding of the night sky in history.

## **AP Physics 1 (Course is archived this school year)**

**Grade 11<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved (Weighted and approved effective with the 2017-2018 school year)**

**Prerequisite:**

\*A grade of B or above in physics.

\*A B or above in pre-calculus or be concurrently enrolled in pre-calculus.

\*Students must have a cumulative High School GPA of 3.3 or higher

\*Students must request the course at the conclusion of their junior year

**Course Description:**

AP Physics 1 is a laboratory-based science course that focuses on the big ideas typically included in the first semester of an algebra-based, introductory college-level physics sequence and provides students with enduring understandings to support future advanced course work in the sciences and engineering. This course will prepare students for the Advanced Placement exam in AP Physics. Through inquiry-based learning, students will develop critical thinking and reasoning skills. Students will cultivate their understanding of physics and science practices as they explore the following topics: kinematics, dynamics, circular motion, universal law of gravitation, simple harmonic motion, impulse, momentum, energy, rotational motion, electrostatics, electric circuits, and waves.

## **AP Environmental Science (Course is archived this school year)**

**Grade 11<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved**

**Prerequisite:**

\*Completion of Biology with a B or better both semesters

\*Completion of one physical science course with a B or better both semesters

\*Students must have a cumulative High School GPA of 3.3 or higher

\*Students must request the course at the end of the year

**Course Description:**

What makes APES so different from many other classes? APES is all about the world in which we live. Everything you learn can be directly applied to real world situations that are happening now. Want to know what toxins are in your air, water, and food? APES. Want to know what a world with 9 billion people will look like? APES. Want to know what threats to civilization we face now and in the future? APES. Major Concepts Covered: Environmental implications of Easter Island, How to calculate/assess ecological an footprint, Concepts of sustainability and sustainable development, Implications of the "Tragedy of the commons", The importance of ecosystem services.

## FOREIGN LANGUAGE DEPARTMENT

**Department Description Sample:** The first two years of language study at Synergy Quantum Academy are devoted to acquiring the fundamental skills of conversation, grammar, reading, and writing as well as an understanding of the culture. Embedded in the language program, students are exposed to the three modes of communication (interpretational, conversational, presentational). The advanced levels include more comprehensive oral response and the student examines, more intently, the literature and culture of the country. In the Native classes, literature is examined since the first year.

### **Possible Career Objectives for the Student with Foreign Language Training**

Airline Flight Attendant	Bilingual Aide	Business Representative
Overseas Officer	Court Reporter	Cultural Anthropologist
Customs Agent	Department Store	Diplomatic Corps Member
Doctor	Exporter/Importer	Hotel Industry Personnel
Human Resources Officer	Interpreter	Journalist
Law Enforcement Officer	Nurse	Social Worker
Teacher	Tour Director	Translator

### **Spanish 1 Non-Native**

**Grade 9<sup>th</sup>-12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved**

**Prerequisite:** Spanish Placement exam will determine course placement

#### **Course Description:**

Spanish Non-Native 1 is designed as a course in which students develop fundamental communication skills for understanding, speaking, reading, and writing in Spanish. Students will acquire knowledge and appreciation for the culture and history of Latin America and Spain through exposure to stories, pictures, music, guest speakers, and interaction with native speakers. Language applications will include thematic vocabulary and use of basic grammatical forms such as present and preterit tenses as well as object pronouns. Mastery of standards will be based on student performance levels rather than grade level proficiency. The goal of this course is to instill in students a desire to continue learning Spanish and utilize their knowledge a basis for further study, travel, or future work.

### **Spanish 2 Non-Native**

**Grade 9<sup>th</sup>-12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved**

**Prerequisite:** Completion of Spanish 1NN with a C- or better

#### **Course Description:**

Spanish Non-Native 2 is a college-prep course of the Spanish language. We will study all areas of language communication: listening, speaking, reading and writing. Students will learn grammar



rules, use new vocabulary from the Spanish-speaking world. We will also study selected topics from the Hispanic/Latino culture, history, tradition and customs. All lessons are based on the Standards for Foreign Language Learning.

Spanish Non-Native 2 begins with a systematic review of the material presented in Spanish 1. The subsequent units spiral upwards, building and expanding on mastered concepts, vocabulary, and grammar rules to increase communicative ability and proficiency in the skills of reading, writing, listening and speaking. The study of cultures of the Spanish speaking world, as well as different dialects, are embedded in each unit. All lessons will be based on the Standards for Foreign Language Learning.

## **Spanish 3 Non- Native**

**Grade 9<sup>th</sup>-12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved**

**Prerequisite:** Completion of Spanish 2 NN with a “C-“ or better

**Course Description:**

Spanish Non-Native 3 is designed as an course in which students develop fundamental communication skills for understanding, speaking, reading, and writing in Spanish. Students will acquire knowledge and appreciation for the culture and history of Latin America and Spain through exposure to stories, pictures, music, guest speakers, and interaction with native speakers. Language applications will include thematic vocabulary and use of basic grammatical forms such as present and preterit tenses as well as object pronouns. Mastery of standards will be based on student performance levels rather than grade level proficiency. The goal of this course is to instill in students a desire to continue learning Spanish and utilize their knowledge a basis for further study, travel, or future work.

## **Spanish 1 Native**

**Grade 9<sup>th</sup>-12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved**

**Prerequisite:** Scoring between 85% - 100% on placement exam (Required)

**Course Description:**

This introductory course in Spanish is designed to lay the groundwork for the study of Spanish. The language’s basic grammatical structure and vocabulary are taught through practice in reading, writing, listening, and speaking. The class includes a study of grammatical structures of the target language. It targets the use of Spanish in informal and formal settings. Students will practice reading and writing extensively. Throughout the course students will be introduced to the culture of various Spanish-speaking countries.

Spanish 1 is a course designed for native speakers to further their native language skills. The course is designed to create a better understanding and appreciation of Latin American culture,

literature and geography.??Throughout the course students will be introduced to the culture of various Spanish-speaking countries. Students will learn grammar structure and verb conjugation. Students will examine socio-cultural issues that will develop their understanding of the Spanish speaking community in the United States and abroad.

## **Spanish 2 Native**

**Grade 9<sup>th</sup>-12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved**

**Prerequisite:** Spanish 1 for native speaker with "C-" or better (Required)

**Course Description:**

This course continues strengthening the language skills of the Spanish-speaking student. Students will expand their existent proficiency in Spanish, improving all skills. This is an advance course in Spanish that will continue the study of the four basic language skills in Spanish for Heritage Language Speakers. Students will speak Spanish at all times when they are in class. Students will continue developing their language skills in speaking, writing, listening, and reading. The course will introduce the students to advanced readings and writing activities. Students will write formal essays. In addition, the students will do presentations in the target language about sociocultural issues. This course seeks to prepare students for AP Spanish language courses.

Spanish native 2 is designed to enhance native Spanish-speakers' skills. It is designed to create an appreciation for reading and writing literary texts in Spanish. The course will teach students to summarize and synthesize facts and concepts within and across texts at literal and inferential levels. The course is design to improve Spanish-speaker's communication skills. The course is designed to teach students to communicate, describe, narrate and hypothesize about real world information. Students will deliver oral presentations that include explanations and definitions according to the audience's knowledge of topic.

## **Spanish 3 Native**

**Grade 11<sup>th</sup>-12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved**

**Prerequisite:** Spanish 2 for native speakers with "C-" or better

**Course Description:**

Spanish for Native Speakers 3 is an elective course that furthers the communication skills acquired in Spanish for Native Speakers 1 and Native Speakers 2, with the aim of language proficiency. During the course of the year, students will speak Spanish at all times inside the classroom. Students will also participate in debates in the target language as well as informal in-class conversations. This course includes the review and expansion of essential Spanish grammar and vocabulary necessary for advanced oral and written communication. Authentic

audio and video recordings as well as native Spanish speakers cultures are accessed to deepen cultural, sociological, and literary insights into the Spanish-speaking world. Writing composition will reflect comprehension and an increasing understanding of the complexities of the language and vocabulary. Students will practice reading and writing in the language. They will read news articles reflecting current events, poems, short stories and a novel or a play chosen by the teacher. Students will write formal essays throughout the year.

## **AP Spanish Language**

**Grade 11<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved: (Weighted, Language other than English)**

**Prerequisite:**

\*Students must have a cumulative High School GPA of 3.0 or higher

\*Students must have received B- or better in all prior Spanish Courses

\* Completion of Spanish Native 3 or based on score on the placement exam

\*Students must request the course at the conclusion of their junior year

**Course Description:**

AP Spanish Language and Culture emphasizes communication by using the three modes of communication in real-life situation (interpersonal, interpretive and presentational skills). The course emphasizes communication. It strives to create global citizens. The course provides students with the opportunity to explore culture in contemporary and historical contexts. The course is structured around six themes:

- Beauty and Aesthetics
- Contemporary Life
- Families and Communities
- Global Challenges
- Personal and Public Identities
- Science and Technology

## **VISUAL & PERFORMING ARTS DEPARTMENT**

Classes in the visual and performing arts provide students the opportunity to discover or develop a talent, explore an area of interest, or acquire appreciation for the arts. Self-motivation, persistence, self-discipline, and patience are qualities that will serve well if pursuing a career in the visual and performing arts.

### **Possible Career Objectives for the Student with Visual Art Training:**

Advertising	Artist	Animator
Art Collector	Art Critic	Art Historian
Art Teacher	Arts Administrator	Book Illustrator
Ceramist	Display Designer	Gallery Director
Historian Interior	Designer Muralist	Painter
Photographer	Potter	Sculptor

### **Possible Career Objectives for the Student with Music Training:**

Accompanist	Arts Administrator	Audio Engineer
Business Manager	Conductor/Director	Copyright researcher/lawyer
Instrument Technician	Music Composer	Music Critic
Music Editor	Musicologist	Orchestra/Band Manager
Performer – Instrumentalist	Performer - Vocalist	Teacher (private or public)
Tour Manager		

### **Music Appreciation (Course has been archived for this school year)**

**Grade 9<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G approved**

**Prerequisite: None**

**Course Description:** This course is an in depth study of music and its relationship with different cultures. We will look at the history of music in the United States including folk music, religious music, jazz, the blues, rock & roll, hip-hop, and more. We will also look at music from around the world including the music of India, Japan, Latin America, Africa, Eastern Europe, and more. Finally, we will look at Western Classical Music. Overall, we will be looking to answer these questions as they relate to the topics above:

- How does music play a role in culture?
- How does culture influence music?
- How do people connect to music?

### **Piano Keyboards**

**Grade 9<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved**

**Prerequisite: None**

**Course Description:** This year long course is designed to give students some basic skills in playing a piano keyboard. You will learn to read music and play simple melodies and songs. You will also learn to utilize the functionality of the keyboard to enhance the melodies you play with chords and beats. You will learn to use these skills to write your own piano composition. This course requires dedication and practice. Overall, this course will teach you how to make music. Some questions that this course will help you answer are:

- How do you read a musical score?
- How many keys come on a standard piano?
- Can I play my favorite songs on the piano after one semester of Piano class? After 1 year?
- How does technology help me to play the piano even better?

**Choir****Grade 9<sup>th</sup>- 12<sup>th</sup>****Course Length: 1 year****Credits: 10****UC A-G Approved****Prerequisite: None**

**Course Description:** This course is designed for the student that likes to sing. It is a beginner's guide to singing in a group. You will learn to match pitch, blend your voice with those around you, sing at correct dynamic levels, sing harmonies as well as melody, and perform with emotion and enthusiasm. We will sing a variety of repertoire including popular music, international music, songs in foreign languages, and songs that are just for fun. You will sing in 2 concerts per semester and participate in a choral festival in the Spring. You will learn to be a better singer and performer and have fun in the process. Some questions that this course will help you answer are:

- How do I read a musical score?
- How do I sing without it hurting my throat?
- How does the voice work?
- How do popular artists hold a note for a long time without taking a breath?
- How can I improve my singing?
- Is choir the same as in shows like *Glee* or movies like *Pitch Perfect*?
- Should I audition for *American Idol* or *The Voice*?

**Choir 2****Grade 9<sup>th</sup>- 12<sup>th</sup>****Course Length: 1 year****Credits: 10****UC A-G Approved: Approved effective with the 2016-2017 school year****Prerequisite: Completed 1 year in Choir****Course Description:**

Choir 2 is a continuation of Choir. It is open to all students who wish to focus on the basics of good vocal technique, sight singing, music theory, vocal skill and performance and to develop

aesthetic and cultural values through critical listening. Students will sing and explore a variety of repertoire from various cultures, time periods, genres and styles.

Choir 2 is a one-year course open to all students interested in participating in a mixed choir. The purpose of this course is to increase the vocal skills and performance levels of each student and to develop aesthetic and cultural values through critical listening and performance. Students will sing a wide range of literature from various cultures, time periods, genres and styles including music from classical, spiritual, jazz, concert, pop and folk cultures using different styles. The literature will include different languages, cultures and styles. The study of this literature will help students attain enhanced awareness of the history surrounding the development of choral literature.

### **Choir 3**

**Grade 9<sup>th</sup> - 12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved: Approved effective with the 2017-2018 school year**

**Prerequisite: Completed Choir 1 and Choir 2**

**Course Description:**

Participation in Choir 3 includes the study of advanced choral literature, note reading, and vocal techniques. Some section rehearsals and public performances are required. An understanding of choral literature and opportunities to view and critique choral performances are important components of the class.

Choir 3 is an advanced level choir for music students that display knowledge of musicianship and the ability to sing with a high level of technical accuracy. Throughout the year students will be exposed to a variety of music through the performance repertoire: concert, jazz, folk and contemporary. Students will be challenged through comprehensive instruction in music theory and practice in advanced level sight reading. Performances throughout the year will connect learning to real world musical experiences.

### **Vocal Ensemble**

**Grade 9<sup>th</sup> - 12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved: Approved effective with the 2016-2017 school year**

**Prerequisite: Audition and/or 1 Year in Choir**

**Course Description:** This course is for more experienced singers. We will explore vocal production in greater depth. We will sing more difficult repertoire. You will continue your study of matching pitch, blending your voice with those around you, singing at correct dynamic levels, singing harmonies with melodies, and performing with emotion and enthusiasm. Your repertoire, while more challenging, will still consist of popular songs, international songs, songs in foreign languages, and songs that are just for fun. You will sing in 2 concerts per semester, a choral

festival in the Spring, and for graduation. You will learn to be a better singer and performer and have fun in the process. Some questions that this course will help you answer are:

- How do I improve my singing?
- How do I improve my sight-singing?
- How do I become a leader in my section?
- What are some tools that will help me emote while I sing?
- How do I find a song that would work well for me as a solo?
- Should I audition for *American Idol* or *The Voice*?

## **Vocal Ensemble 2**

**Grade 9<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved: Approved effective with the 2016-2017 school year**

**Prerequisite:** Audition and/or 1 Year in Choir

### **Course Description:**

This course is a yearlong intermediate choir course designed to improve the vocal technique and musicianship of the student members in order to prepare for public performances and to promote life long learning and participation in music. Audition is required. Performances will include 2 concerts per semester, a choral festival, graduation, and various events on and off campus.

## **Computer/Graphic Design**

**Grade 9<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved**

**Prerequisite: None**

**Course Description:** This course will be creating, writing, communicating, and studying modern and historical art with a focus on the elements of art and principles of design. Computers will be the tool for visual problem solving, creative expression, research and communication. You will learn how to use digital manipulation programs like Adobe Illustrator and Photoshop.

Discourse may be centered on the following questions:

- What do I consider art? How can we use art to promote change?
- How can we create a logo to appease a client?
- How do we read art? How does that translate to talking and writing about art?
- What kind of art interests us? How do we make meaning in art?

## **COLLEGE PREP ELECTIVES**

The intent of the college-preparatory elective requirement is to provide students the opportunity to explore various subjects that may potentially interest them for major study in College.

### **Art History (Course has been archived for this school year)**

**Grade 12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved (G-College Prep Elective)**

**Prerequisite: None**

#### **Course Description:**

Art History offers students the opportunity to explore in depth, discover, appreciate, and acquire knowledge of the history of art from ancient times to present. Students will learn to examine and critically analyze major forms of artistic expression from diverse cultures, and understand these cultures' contribution to the arts. A variety of art media and styles will be studied including architecture, manuscripts, painting, drawing, printmaking and sculpture. Through readings, research, slides, videos, and museum visits, students will view significant artworks from around the world. This class will give students the opportunity to use their prior knowledge of history, geography, politics, religion, languages, literature, and the visual arts.

### **Introduction to Art History (Course has been archived for this school year)**

**Grade 9<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 semester**

**Credits: 5**

**UC approval: Approved effective with the 2016-2017 school year, (G-College Prep Elective)**

**Prerequisite: None**

#### **Course Description:**

Art History offers students the opportunity to explore, discover, appreciate, and acquire the knowledge of the history of art. A variety of art media and styles will be studied including painting, drawing, printmaking, mixed media, sculpture, and architecture. These mediums, in various forms, will offer insight into understanding what art is, who makes art, and why they make art. Art is a humanistic quality and the rationale for its existence is unlimited. This class will explore the primary social constructs of art's existence: survival, religion, state, the self and society.

### **College and Career Seminar**

**Grade: 12<sup>th</sup>**

**Course Length: 1 Semester**

**Credits: 5**

**UC A-G Approved (G-College Prep Elective)**

**Prerequisite: None**

#### **Course Description:**

College Seminar is a course that prepares students for life after high school. It is a course specifically designed to map the knowledge and skills required for students to venture out to college and the work force. The learning objectives of the units are aimed at ensuring ALL



students:

- Are College and Career Ready
- Have chosen a college or program that is based on a career of their choosing.
- Have chosen a college or post-secondary training option that will provide the program or major that meets their career requirements.
- Enter college or post-secondary training with a detailed and personalized Career and Education Plan detailing an efficient path to a self-sufficient life.

## **Creative Writing**

**Grade 10<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 Semester**

**Credits: 5**

**UC A-G Approved ( G-College Prep Elective)**

**Prerequisite: None**

**Course Description:**

Over the course of the semester students study, analyze and write personal narratives (quarter 1), poetry (quarter 2), fiction (quarter 3) and screenplays (quarter 4). Effective pre-writing, rough draft and final draft techniques are examined in order for students self-monitor prior to publishing their work electronically. Literary devices pertinent to each of the four genres is emphasized. Creative Writing gives students strategies and practice in writing poetry, prose, and criticism. Through large and small groups, students discuss the aesthetic values of word choice, the importance of criticism, and the demands of finding one's voice. Students will also acquire tools for improving their writing skills including: writing process (pre-writing, drafting, peer editing, editing, proofreading, and publishing), close reading, writing exercises, and correct mechanics and grammar use.

## **Leadership Development (Course is offered 2<sup>nd</sup> semester )**

**Grade 9<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 Semester**

**Credits: 5**

**UC A-G Approved (G-College Prep Elective)**

**Prerequisite: None**

**Course Description:**

In today's fast-paced and ever evolving world, universities, business, and other organizations consider leadership skills essential in evaluating the eligibility of potential candidates. Leadership Development is the study and practice of the art and the science of leadership. It is an opportunity to create positive social change within the context of your school environment. You will develop personally and professionally in the field of leadership while telling your story, building your strengths, and influencing others. While the course is not a required prerequisite for ASB, it does provide a strong foundation for candidacy.

**By taking this course, you will be able to answer over 30 questions, broken into the following themes:**

- 1) What is leadership and what is my role as a leader?
- 2) How do I create a vision and plan for my impact this semester?

- 3) How can I analyze my vision and make my vision a reality?
- 4) How can I become the leader that I need to be individually?
- 5) How can I engage others in my leadership?
- 6) How can I continue to influence others during and after the semester?
- 7) How can I review impact have I made this semester and continue to make an impact after the semester is over?

## **Piano Keyboards Intro (Course has been archived for this school year)**

**Grade 9<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 Semester**

**Credits: 5**

**UC A-G Approved (G-College Prep Elective)**

**Prerequisite: None**

### **Course Description:**

The Beginning Piano class is for students with no prior musical knowledge who wish to explore music on the keyboard without a full year commitment. Class will be held in a keyboard/music lab where players practice and hear their work through headphones. Students will learn the fundamentals of music reading, music structure, melodic playing and chording. The course will satisfy the "g" requirement for admission to a CSU/UC.

Students will receive an introduction to music literacy, theory and multi-cultural, historical context for the piano. Students will learn keyboard fundamentals: use of independent and coordinated hands with good posture and technique; the reading of music notation on two staves (the "grand staff"); rhythmic and pitch notation, chord symbols, dynamics, style, articulation and phrasing. They will perform technique exercises and solo piano literature of varying difficulty levels. Students will be expected to critique and evaluate their own performance. At the end of the course, students will be able to read music and understand the connection of the printed material to musical keyboard performance.

## **Introduction to Psychology**

**Grade 9<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 Semester**

**Credits: 5**

**UC approval: Approved effective with the 2016-2017 school year (G-College Prep Elective)**

**Prerequisite: None**

### **Course Description:**

This course introduces students to the systematic and scientific study of behavior and mental processes of human beings. Students learn about the history of psychology including current theories. The psychological facts, principles, and phenomena associated with this science are explored through case studies, cultural diversity, contemporary events, and research readings. Students develop an understanding of the ethical implications and challenges to practical methods used by psychologists and psychiatrists.

## **Film Studies** (Course has been archived for this school year)

**Grade 9<sup>th</sup> - 12<sup>th</sup>**

**Course Length: 1 Semester**

**Credits: 5**

**UC A-G approved: Approved effective with the 2016-2017 school year (G-College Prep Elective)**

**Prerequisite:**

**Course Description:**

In Film Studies, students will watch a variety of films that have had an impact, in one way or another, on the evolution of film over time. They will work in groups to answer self-selected questions as they discuss various aspects of each film, from basic elements such as plot and characters to deeper things such as the meaning and purpose of the film. In addition, each student will be responsible for completing an individual student film that will take the entire semester to produce, and will include such elements as producing a script, creating storyboards, assembling a cast and crew, filming, and editing the final film to be presented in class.

## **Trials in History**

**Grade 9<sup>th</sup> - 12<sup>th</sup>**

**Course Length: 1 Semester**

**Credits: 5**

**UC A-G Approved: Approved effective with the 2017-2018 school year (College Prep Elective)**

**Prerequisite: None**

**Course Description:**

This course focuses on famous political trials in history. It examines issues of evidence, interpretation, law, and society. Some questions we will ask include: What role does the trial play in public discourse? How does it crystallize certain political and social issues of the moment? How does the trial operate as drama? Are there certain conventions of trials which have emerged over time? How do legal reasoning and storytelling interact in these trials? What conflicts emerge in the trials between individuals and the state, the church and the state, actors in public and private arenas? How do trials contribute to (and detract) from public discourse? What role does changing technology play in trials? The Trials studied include:

- . The Trial of Socrates
- . Joan of Arc
- . Galileo
- . Scopes Monkey Trial
- . Salem Witch Trial
- . Trial of Louis XVI and Trial Marie Antoinette
- . Stalin's Show Trials
- . Nuremberg Nazi War Crime Trials
- . The OJ Simpson Trial

## **Cultural Studies** (Course has been archived for this school year)

**Grade 9<sup>th</sup> - 12<sup>th</sup>**

**Course Length: 1 Semester**

**Credits: 5**

**UC A-G Approved: Approved effective with the 2016-2017 school year (G-College Prep Elective)**

**Prerequisite:** None

**Course Description:** In this course we will explore identity through an understanding of how economics, politics, history, family, gender, education, literature and the arts have shaped Chicano Studies and the diverse experiences of Chicano, Mexicano, and Hispano people in the United States. We will investigate how our understanding of our place in American cultural life has shaped us and how these events affect our individual identity formation. We will also explore what we each bring to the classroom and how we each contribute to our learning. To build this foundational base we need to understand the history of the Chicano experience in the United States with regard to perceived notions of racial, class, gender, and ethnic politics. Critical thinking will lead to the kind of critical questioning that decodes and deconstructs the function and formation of these elements in society. Students often bring strong views and opinions about race, gender, and class relations to their discussions. It is important our discussions take place in a safe and respectful pedagogical environment. This classroom is a social safe space that encourages the exchange of informed ideas and views. Because the subject matter is sensitive, respect must be given to all viewpoints.

### **Health Education: Human Anatomy & Personal Health**

**Grade 9<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 Semester**

**Credits: 5**

**UC A-G Approved. Approved effective with the 2016-2017 school year (G-College Prep Elective)**

**Prerequisite:** None

**Course Description:**

Human Anatomy and Personal Health emphasizes the importance of knowledge, attitudes, and practices relating to personal health and the human body. It is a course designed to expose students to a broad range of issues and information relating to the various aspects of personal health and the human body, which include basic human anatomy, the physical, social, emotional, intellectual, spiritual and environmental aspects. Topics of exploration include, but are not limited to: skeletal system, muscular system, respiratory system, nervous system, reproductive system, drugs and alcohol prevention, and diseases and disorders.

### **Health: Health Wellness (Course has been archived for this school year)**

**Grade 9<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 Semester**

**Credits: 5**

**UC A-G approved. Approved effective with the 2015-2016 school year (G-College Prep Elective)**

**Prerequisite:** None

**Course Description:**

This course will focus on practical application such as learning CPR and First Aid. STD and pregnancy prevention will be explored with an outside organization called Pep L.A. (Peer Education Program of Los Angeles). Students will discuss and learn about HIV and AIDS prevention, how to deal with stress, preventing diabetes, proper nutrition, alcohol and drug prevention education.

## **BEAM (Business, Entrepreneurship, and Math)**

**Grade 9<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G approved. Approved effective with the 2018-2019 school year (G-College Prep Elective)**

**Prerequisite:** Algebra 1 (with a B or higher)

### **Course Description:**

The BEAM (Business, Entrepreneurship, and Math) course strives to create a true public-private partnership by providing high school students the opportunity to connect with local innovation communities while gaining real world professional experience. In the program, students learn how mathematics applies in the real world through business applications, design thinking, and project based learning from customized curricula created in partnership with Ernst&Young and PricewaterhouseCoopers. Students give back to the community, complete real-life projects, and obtain hands-on experience in fields such as entrepreneurship, finance, and quantitative marketing through their volunteer work for local small businesses and non-profit organizations. Students also receive mentorship from private sector firms and business school alumni. The course is run as an organization, where students have executive and non-executive roles.

## **ENGINEERING/ TECHNOLOGY DEPARTMENT**

The study of engineering teaches students valuable skills such as problem solving, teamwork, and critical thinking. These skills are transferable to a wide array of careers including but not limited to actually being an engineer.

The goal of the Technology Department at Synergy Quantum Academy is to provide students with both foundational computer literacy as well as more specialized and advanced knowledge that will allow students to pursue STEM-related fields including courses that incorporate artistic creativity. Additionally, all students enrolled in a technology course learn essential and 21st-century computing skills that can transfer to all other subjects at SQA. A student that fulfills all courses within the Technology Department will be fully technologically literate and have a head start when pursuing jobs and majors related to, but not limited to, graphic art, website design, blog journalism, and film.

### **Introduction to Computer Science**

**Grade 9<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 Semester**

**Credits: 5**

**UC A-G Approved: Approved effective with the 2016-2017 school year ( G- elective)**

**Prerequisite: None**

**Course Description:** This course is based on the Beauty and Joy of Computing course at UC Berkeley. This is a broad-based introduction class that uses the SNAP! visual programming language to introduce students to computational thinking. The course focuses on the transformative and empowering experience that comes with learning how to program the computer. It covers topics such as abstraction, design, concurrency, simulations, history of computers, applications of computing, and the limits of computation. This course will culminate with a final project of choice. Students will reimagine games such as PacMan and learn to program games of their own. The course will include lectures, research, presentations/ projects.

### **Introduction to Computer Science Principles (Offered 2<sup>nd</sup> semester only)**

**Grade 9<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 Semester**

**Credits: 5**

**UC A-G Approved: Approved effective with the 2016-2017 school year ( G- Elective)**

**Prerequisite: None**

**Course Description:** Building on what students learned in Introduction to Computer Science, students will build on their knowledge of writing programs using block languages such as SNAP and BYOB and learn to write similar programs using the text based language, Python. One of their first assignments after learning Python is to translate a SNAP program into python. This class is project based, so the majority of the time will be spent creating projects such as text based adventure games, creating a game show program, creating a tic-tac-toe game, writing arguments, using Boolean expressions, learning how to debug a program. Students will use the program EarSketch to write songs. To help those who plan to take AP

Computer Science Principles, students will complete a long-term project. The course will include lectures, research, presentations, and weekly projects.

## **AP Computer Science Principles (Course has been archived this school year)**

**Grade 10<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved: (Weighted; effective with the 2017-2018 academic year, G elective)**

**Prerequisite:**

\*Students must have a cumulative High School GPA of 3.3 or higher

\*Students must have received C or better in Intro to Computer Science & Principles

\*Students must request the course at the conclusion of the academic year

**Course Description:**

AP Computer Science Principles is designed to encourage a diverse group of students to explore computer science. AP Computer Science Principles is designed to be equivalent to a first-semester introductory college computing course. Rather than limiting this introductory study to just two traditional topics – algorithms and programming – this course introduces students to a broad set of big ideas. These big ideas, which include algorithms and programming, are often summarized using the terms *creativity*, *abstraction*, *data*, *Internet*, and *impact*. In addition, this course emphasizes the use of computational thinking practices for effective learning experiences and problem solving. These practices include connecting, creating, abstracting, analyzing, communicating, and collaborating.

## **Introduction to Engineering Design**

**Grade 10<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved (CTE course, G Elective)**

**Prerequisite:** Completion of Geometry with a C- or better or as long as student is also concurrently enrolled in Geometry while taking IED.

**Course Description:** Introduction to engineering is one of two foundational Project Lead the Way engineering courses offered at Synergy Quantum Academy. This course introduces students to the engineering profession and the engineering design process, a common approach used by engineers to solve problems. In this course, students use an activity-project-problem-based (APB) model to design solutions to real world challenges. During this year long course students will work on improving existing products and inventing new ones. In the first semester, students use blocks and models to envision how products are created and shaped. They do technical sketching and drawing to understand the importance of visual representations. Students will learn statistical modeling using Microsoft Excel and hone their mathematical skills to prepare for the design process that will occur during the second semester. In the second semester, students use Autodesk Inventor software to create designs and communicate product detail. This course demonstrates that the engineering process has many facets combining knowledge of physical science, creative design, mathematical insight, organizational skills, data analysis, documentation using engineering notebooks and critical thinking. The course will include lectures, discussions,

group projects, presentations, in-class use of technology, such as 3-D software as well as 3-D printing, outside research and fieldtrips.

## **Principles of Engineering**

**Grade 11<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 Year**

**Credits: 10**

**UC A-G Approved (CTE course, G Elective)**

**Prerequisite:** Completion of Introduction to Engineering Design

**Course Description:** Principles of Engineering is the second of two foundational Project Lead the Way courses offered at Synergy Quantum Academy. This course introduces students to the foundation principles of engineering. Students will have an opportunity to apply these principles to real-life problems as they explore alternative energies such as solar, wind, and thermal energy. Students will do materials testing to understand how and why some materials hold up under stress and others do not. They will also learn about hydraulic and fluid motion. In the final units students learn to control mechanical systems by writing code. They will use this knowledge to solve a design problem using the design process as their guide. They will use this knowledge in their final unit of the course to create a vehicle that will propel an object. This course demonstrates that the engineering process has many facets combining knowledge of physical science, creative design, mathematical insight, organizational skills, data analysis, documentation using engineering notebooks and critical thinking. The course will include lectures, discussions, group projects, presentations, in-class use of technology, such as robotics kits, solar cells and fuel cells, outside research and fieldtrips.

## **Engineer Your World (Course is archived for this school year)**

**Grade 11<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 year**

**Credits: 10**

**UC A-G Approved**

**Course Description:**

Engineering Your World is a year-long high school engineering course that provides hands-on, authentic engineering practices in a project-based environment. By scaffolding student learning over a series of engaging and socially relevant design challenges, the curriculum tells students the story of engineering as they develop design skills and engineering habits of mind. *Engineer Your World* promotes student learning in three categories: engineering applications, engineering process, and engineering skills and habits of mind.

## **Exploring Computers**

**Grade 9<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 Semester**

**Credits: 5**

**UC A-G Approved ( G-Elective)**



**Prerequisite:** None

**Course Description:** In keeping up with the digital revolution that is occurring worldwide and emphasizing its STEM focus, Synergy Quantum Academy is moving toward a model of digital integration of within the classroom setting. Exploring Computers is the introductory course that establishes the foundation for success in navigating effective computer usage. This semester, you will learn about digital literacy, digital citizenship, Internet usage, Microsoft Word, Microsoft Excel, and Microsoft PowerPoint.

- How do I maximize my efficiency and effectiveness within a high school, collegiate, and employment setting through Google products?
- How can I utilize the power of digital networks in a positive way such that I can safely manage myself from the dangers of the Internet?
- How do I unlock my researching potential in a high school, collegiate, and employment setting?
- How is Microsoft Word used for creating professional and creative documents?
- How is Microsoft Excel used for collecting, managing, and analyzing data in the 21st century?
- How is Microsoft PowerPoint used for preparing and executing professional presentations

## **Advance Exploring Computers**

**Grade 9<sup>th</sup> - 12<sup>th</sup>**

**Course Length: 1 Semester**

**Credits: 5**

**UC A-G Approved: Approved effective with the 2016-2017 school year, G Elective**

**Prerequisite:** Completion of Exploring Computers with a "C-" or better

### **Course Description:**

Where Exploring Computers I allows students to learn foundational computer competencies, Exploring Computers II hopes to inspire students to pursue a specific STEM-related career at the university level through an exposure to many high-level tech projects. Throughout the semester, students will create a Google Site that will serve as a portfolio. Within this portfolio, students will blog about current events, create infographics and icons using Google Drawing, build a code-based game through Scratch, as well as develop and edit a professional music video using iMovie and YouTube Editor

Discourse may be centered around the following questions:

- How do I create effective online portfolios?
- What are the basics of online blogging?
- How do infographics and icons visually enhance a website?
- What are the basics of creating an online, code-based, game?
- How can I use iMovie and YouTube Editor to develop and edit a professional music vide

## **SYNERGY ELECTIVES**

### **SAT Prep Elective**

**Grade 9<sup>th</sup> - 12<sup>th</sup>**

**Course Length: 1 Semester**

**Credits: 5**

**Prerequisite: Algebra 2**

**Course Description:**

The PSAT/SAT Prep course is designed to help students prepare for the rigors of taking the PSAT and/or SAT tests offered by the College Board. Our primary goal is to identify and implement test taking strategies using prerequisite knowledge to increase student performance. Students in this course should have passed Algebra 2 or are taking it concurrently.

### **Physical Education (PE)**

**Grade 9<sup>th</sup> - 12<sup>th</sup>**

**Course Length: 1 Semester**

**Credits: 5**

**Prerequisite: None**

**Course Description:**

The physical education program provides each student with the opportunity to participate in a comprehensive program consisting of skill development, lead up games, team sports, individual sports, and physical fitness activities. The students receive instruction in rules, skill, and strategies associated with the different sports as well as learning experiences involving physical conditioning activities and lifelong physical activities. The program promotes the spirit of cooperation, leadership, fair play, and friendly competition.

### **Sports PE**

**Grade 9<sup>th</sup> - 12<sup>th</sup>**

**Course Length: 1 Semester**

**Credits: 5**

**Prerequisite:** Enrolled in a school related sport. Official rosters will be used to confirm enrollment in course.

**Course Description:**

This course was designed for student athletes who are in enrolled in afterschool sport(s). The program provides opportunity for each student to practice their own individual sport skills. This class is offered during seventh period only so that it can allow the student to compete off or on campus without affecting their school schedule and academic performance. The student receives instruction in strategies associated with the different sports as well as learning experiences involving physical conditioning activities and lifelong physical activities. The program promotes the spirit of cooperation, leadership, fair play, and friendly competition. By the end of the year students will have refined their individual sports skills. Students grades and academic goals will not be affected due to game times during school hours.

### **Associated Student Body (Course has been archived this school year)**

**Grade 9<sup>th</sup> - 12<sup>th</sup>**

**Course Length: 1 Semester**

**Credits: 5**

**Prerequisite:** In order to be considered for a position within ASB, students must opt in and win

the general election, maintain a 3.0 cumulative GPA, secure a letter of recommendation, complete the application, and be in good standing with the school behaviorally, financially, or otherwise. Some positions require additional requirements. While previous service in ASB is not a requirement, it is recommended for some of the leadership roles within the class.

**Course Description:**

The purpose of Associated Student Body (ASB) is to develop students as school and community leaders that create everlasting memories for the constituents in which they serve. As part of this mission, students practice purposeful planning, expert execution, and timely reflection of all events, including, but not limited to, social, fundraising, spirit, and service events. Simultaneously, students are moderating class-wide meetings, discussing themes as they relate to leadership, and analyzing quantitative and qualitative data that help drive their operations.

**Yearbook**

**Grade 9<sup>th</sup>- 12<sup>th</sup>**

**Course Length: 1 Semester**

**Credits: 5**

**Prerequisite:** In order to be considered for yearbook, students must opt in, maintain a 3.0 cumulative GPA, secure a letter of recommendation, complete the application, and be in good standing with the school behaviorally or otherwise.

**Course Description:**

Yearbook is a class that requires creativity, photography, and independent work, along with leadership skills. Students will have an opportunity to take photographs at school events including sports events. We put these all into the yearbook and create memories in the yearbook. Students must be able to work with others, as well as work independently and have a good discipline record, as students will be needed to go outside of the classroom to photograph events and must perform accordingly.

## ACADEMIC SUPPORT CLASSES

### **Algebra Tutorial (Course has been archived for this school year)**

**Grade 9<sup>th</sup>**

**Course Length: Semester or Year-Long**

**Credits: 5-10 credits**

**Prerequisite:** Students are scheduled into Algebra Tutorial as a result of SMI data paired with teacher recommendation.

**Course Description:**

In the transition between middle school and high school, many students have developed gaps in knowledge when it comes to mathematical principles. Algebra 1 Tutorial is designed to provide students with additional foundational skills and practice required to successfully complete Algebra 1. Students will develop procedural fluency and conceptual understanding of whole number operations, integer operations, fraction and decimal operations, expressions and equations, and graphing as is dictated by Common Core State Standards.

### **Math 180 I**

**Grade 9<sup>th</sup>-10<sup>th</sup>**

**Course Length: Semester or Year-Long**

**Credits: 5-10 credits**

**Prerequisite:** Students are scheduled into Algebra Tutorial as a result of prior grades in Math 8/9 and/or test results paired with teacher recommendation.

**Course Description:**

Designed for students who need to build numerical understanding and reasoning skills, *MATH 180 Course I* focuses on key foundation concepts that enable students to make connections while learning to think algebraically.

### **Math 180 II**

**Grade 9<sup>th</sup>-10<sup>th</sup>**

**Course Length: Semester or Year-Long**

**Credits: 5-10 credits**

**Prerequisite:** Students are scheduled into Algebra Tutorial as a result of prior grades in Math 8/9 and/or test results paired with teacher recommendation.

**Course Description:**

The *MATH 180 Course II* curriculum transitions students to pre-algebra with an emphasis on building proportional reasoning with rates, ratios and linear relationships, and functions. Visual models bring coherence to instruction, making abstract concepts more concrete.

### **Aventa (Course has been archived for this school year)**

**Grade: 9<sup>th</sup>-12<sup>th</sup>**

**Course Length: Semester or Year-Long**

**Credits:** No credits assigned by school site, credits assigned at completion of Aventa Course

**UC approval:** Please refer the Fuel Education UC Doorways Course list for more information

**Prerequisite:** Per student's academic/credit deficiencies and Counselor recommendation.

**Course Description:**

Aventa is a credit recovery course designed to give high school students -- who previously have failed classes -- the opportunity to retake a course through alternate means—and thereby avoid failure and earn academic credit. Students are assigned an online class via Fuel Education (formerly Aventa Learning) and will work during school hours and after under the guidance of a

teacher, and they are encouraged to work at their own pace after school hours. Students are expected to keep in constant contact with their mentor and online teachers via email, phone call or face-to-face. There are end dates for each online class and for all students with an account. It is up to the students to dictate their own, consistent pace. Ideally, 5 assessments per week are the weekly goals for students to accomplish with a passing grade. Students must complete their coursework by the end of the due date OR they are subject to being dropped from the class and asked to attend adult school.

## **English 9 Composition**

**Grade 9<sup>th</sup>**

**Course Length: Semester or Year-Long**

**Credits: 5-10 credits**

**Prerequisite:** Students are selected for the class based on their 8th grade writing diagnostic, lexile score, and their second semester 8th grade English grade.

**Course Description:**

English 9 Composition is a writing support class for Freshman. Students are selected for the class based on their 8th grade writing diagnostic, lexile score, and their second semester 8th grade English grade. English 9 Composition shadows the content in the regular English 9 course in order to give students more time and instruction in reading comprehension, vocabulary development, active speaking and listening skills, with an emphasis on formal writing skills, including clarity and concision within various essay structures. Depending on the students' progress they may be removed after the first semester and students who need additional support, as deemed by their English 9 teacher, will be placed in the class in Spring semester.

## **Resource Academic Support**

**Grade: 9<sup>th</sup>-12<sup>th</sup>**

**Course Length: Semester or Year-Long**

**Credits: 5-10 credits**

**Prerequisite:** As dictated in student's IEP

**Course Description:**

Resource is an academic support class for special education students in grades 9-12. Students are selected for the class based their grades and their need for support in general education classes as expressed in their IEP. Resource also works to strengthen academic and life skills. Students use half of their designated time on to improve their reading level and math skills. They use the second half to receive classroom support. Depending on the students' progress, they may be removed after the first semester depending on their grades or need as deemed by the parents and students.

