



University Preparatory Academy
2017-18 Course Catalog

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UPA Mission

The mission of University Preparatory Academy is to prepare a diverse population of 7th–12th grade students in Santa Clara County to enter and excel in the best colleges and universities in the nation.

University Preparatory Academy Charter School Expected School Wide Learning Results

UPA students will possess strong written and verbal communication skills.

UPA students will demonstrate mastery of and apply mathematical and scientific concepts.

UPA students will think critically and creatively.

UPA students will utilize a global perspective.

UPA students will be technologically fluent.

UPA students will practice and value the visual and performing arts.

UPA students will exhibit leadership skills that demonstrate personal and social responsibility.

Expectations for Students

UPA Students Will Be Expected to:

Abide by UPA Common Dress Code

Complete Schoolwork to the Best of Your Ability

Attend School Every day

Arrive Early to School and to All Classes

Be Safe and Use Common Sense

Respect Property of All Persons

Demonstrate Leadership and Intellect

UPA Middle School Promotion / Graduation Requirements

In order to ensure student success in high school, all 8th grade students will be required to complete the following requirements:

- Proficiency level on standardized
- End of course grade of C or higher in core courses
- Growth on NWEA or equivalent tests

In accordance with the law and as per UPA Board Policy, and the ultimate recommendation of the teacher, a student may be retained in 8th grade for failure to achieve proficiency on the CST in Language Arts and Mathematics, normal progress on Northwest Evaluation Association (or other comparable test) level tests (230 RIT level for Reading, Language Arts, and Mathematics), or satisfactory academic performance (i.e.; grading reports).

UPA High School Graduation Requirements

UPA Graduation Requirements

Subject Area	UPA Requirement	UC Status
Social Studies	30 Units	All must be UC “a”
English	40 Units	All must be UC “b”
Mathematics	≥ 30 Units including Algebra 2	All must be UC “c”
Laboratory Science	≥ 30 Units	All must be UC “d”, and must include Biology and Chemistry
Foreign Language	≥ 30 Units	All must be UC “e”
Visual and Performing Arts	≥ 20 Units	At least one must be UC “f”
AP US Government & Politics / Economics	10 Units (5 Units / 5 Units)	Must be UC “a” / “g”, also required to meet CA high school graduation requirements
Physical Education	≥ 10 Units (or waiver to academic credits)	Not UC required
Advisory	≥ 15 Units (at 2.5 units/semester)	Not UC required
General Electives	≥ 35 Units	Prefer UC approved “a-g”
Total Units	≥ 250 Units	≥ 180 Units must be UC “a-g”
California High School Exit Exam	– English Language Arts – Mathematics	<u>Must Pass</u>
Advanced Placement	≥ 2 courses	Recommended
Other	Senior Project	No requirement articulated
Technology	Proficiency	No requirement articulated
Community Service	≥ 30 hours per year, ≥ 120 total hours	Not UC required

UPA’s high school graduation requirements currently emphasize the traditional university preparatory courses of English, Mathematics, Science, Social Science, Foreign Language, and the Visual and Performing Arts. However, these courses will be taught in a real world context that challenges each student to think beyond the subject matter that is being presented and continually place new information in the context of their own knowledge base. University Preparatory Academy’s graduation requirements, subject to further revision and improvement, exceed the minimum California high school graduation requirements and meet or exceed the University of California “a-g” and California State University course content requirements.

Social Sciences Department, UC / CSU Content Area “a”

The Social Sciences Department course offerings are listed in Table 1 and the course descriptions following it.

Table 1 Social Sciences Department Course Offerings (UC “a”)

Course	Course Code	Grade Level
World Civilization	S2000xx	7
American History	S0800xx	8
World Geography “a”	S1000xx	9
World History “a”	S2000xx	10
AP World History “a” / “g”	S2050xx	10
United States History “a”	S3000xx	11
AP United States History “a” / “g”	S3050xx	11
AP United States Government & Politics “a” / “g”	S4050xx	12
Economics “a” / “g”	S4100xx	12
AP Psychology “a” / “g”	S5050XX	12

Course Title:	Ancient Civilizations		
Course Code:	S0700xx	Grade Level(s):	7
Course INFO:	2 Semesters / 5 Units per Semester		
HS Graduation Credit:	N/A		
UC / CSU:	N/A	Honors:	No
<p>This is a course that will blend six historical themes of Geography, Culture, Economics, Government, Belief Systems plus Science and Technology to eight units of study. An interactive journey that introduces World History, the Growth of Islam, African Civilizations, Asian Civilizations, Medieval Europe, the Civilizations of the Americas, European Renaissance and Reformation plus Early Modern Europe. Students will connect to four sections of learning throughout the course from reading and critical thinking skills, chronological and spatial thinking skills, research skills, evidence, and point of view skills to historical interpretation skills. Students will be writing about history using primary sources to examine comparisons across cultures. Through the skill builder activities, students will look at stories and legends, maps and legends plus daily life to connect literature and geography. There will be a special section exploring strategies for taking tests that will cover multiple choice responses, charts and graphical information, maps, time lines, short answer, short essay and document-based questions. Students will identify pieces of history predominantly moving from 500 AD to 1800 AD.</p>			

Course Title:	American History		
Course Code:	S0800xx	Grade Level(s):	8
Course INFO:	2 Semesters / 5 Units per Semester		
HS Graduation Credit:	N/A		
UC / CSU:	N/A	Honors:	No
<p>The purpose of this course is to provide an understanding of the political, economic, technological, and social development of the United States from Exploration to World War I. Students will examine the connections to the past, and prepare for a future as participating members of a democratic society. Emphasis is placed on technical writing, research, and technology. This course emphasizes critical thinking and application skills. Additionally, students will be expected to complete projects and demonstrations that are consistent with a rigorous, academically oriented course.</p>			

Course Title:	World Geography		
Course Code:	S1000Xxx	Grade Level(s):	9
Course INFO:	2 Semesters / 5 Units per Semester		
HS Graduation Credit:	Social Science / Elective		
UC / CSU:	a/g	Honors:	No
<p>Through study of the physical and human geographic elements of the world and a wide survey of the world's history, we will be developing and practicing three main skills; reading, writing, and historical thinking. These skills have essential value in furthering your education and use in a wide range of potential careers. Furthermore, the course will take a “Pre-AP” approach. This means that our learning strategies will almost always be geared towards preparing students to be ready to take the rigorous AP World History and AP US History courses as Sophomores and Juniors.</p>			

Course Title:	World History		
Course Code:	S2000xx	Grade Level(s):	10
Prerequisite(s):	Successful completion of World Geography or equivalent		
Course INFO:	2 Semesters / 5 Units per Semester		
HS Graduation Credit:	Social Science / Elective		
UC / CSU:	a	Honors:	No
<p>The first purpose of the course is to teach history in a nontraditional way that looks at the common threads of humanity over time—trade, religion, politics, society, and technology—and investigate how these things have changed and continued over time in different places.</p> <p>The second purpose of the course is to intensively practice historical reading and the practice of writing a historical research paper. Students will be instructed in the methods of how to read and interpret primary and secondary historical sources. Students will also practice the techniques and methods of how to write historical research papers.</p>			

Course Title:	AP World History		
Course Code:	S2050xx	Grade Level(s):	10
Prerequisite(s):	“B” or higher in World Geography or teacher recommendation		
Course INFO:	2 Semesters / 5 Units per Semester		
HS Graduation Credit:	Social Sciences / Elective		
UC / CSU:	a/g	Honors:	Yes (AP)
<p>The purpose of the AP World History course is to develop greater understanding of the evolution of global processes and contacts in different types of human societies. This understanding is advanced through a combination of selective factual knowledge and appropriate analytical skills. The course highlights the nature of changes in global frameworks and their causes and consequences, as well as comparisons among major societies. It emphasizes relevant factual knowledge, leading interpretive issues, and skills in analyzing types of historical evidence. Periodization, explicitly discussed, forms an organizing principle to address change and continuity throughout the course. Specific themes provide further organization to the course, along with consistent attention to contacts among societies that form the core of world history as a field of study.</p>			

Course Title:	United States History		
Course Code:	S3000xx	Grade Level(s):	11
Prerequisite(s):	“C–” or better in World History		
Course INFO:	2 Semesters / 5 Units per Semester		
HS Graduation Credit:	Social Science / Elective		
UC / CSU:	a	Honors:	No
<p>This is a one-year course in U.S. History with primary focus on events of the 20th century but connecting to past learning from Colonial times through Westward expansion.</p>			

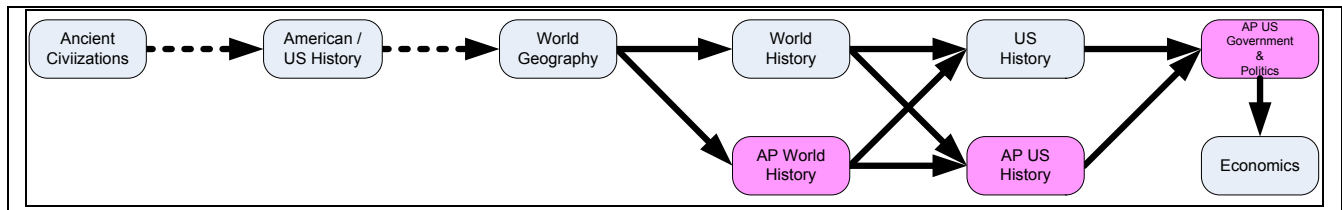
Course Title:	AP United States History		
Course Code:	S3050xx	Grade Level(s):	11 recommended or 12
Prerequisite(s):	“B” or higher in World History or “C” or higher in AP World History recommended or teacher recommendation		
Course INFO:	2 Semesters / 5 Units per Semester		
HS Graduation Credit:	Social Science / Elective		
UC / CSU:	a/g	Honors:	Yes (AP)
<p>The main purpose of this course is to provide a clear understanding of the political, economic, technological, and social development of the United States from early exploration to the present. It emphasizes relevant factual knowledge, leading interpretive issues, and skills in analyzing types of historical evidence. Periodization, explicitly discussed, forms an organizing principle to address change and continuity throughout the course. Specific themes provide further organization to the course. This course traces the theme of race over time by focusing on the development of slavery, slave culture and resistance, abolitionist movements, the effects and impact of Reconstruction on African Americans, the development of Jim Crow laws, the Great Migration, as well as the struggles for civil rights in the 19th and 20th centuries. Other themes emphasized in this course include progression of the American identity, the evolution of American culture, economic trends, issues on the environment, reform movements, and the issue of slavery and its impact in North America. The understanding and mastering of these themes is advanced through a combination of selective factual knowledge and appropriate analytical skills such as critical thinking and historical consciousness.</p> <p>The secondary purpose is to prepare students to take an extremely challenging and comprehensive AP Exam at the end of the year. The pace and scope of the course will reflect our common goal of being expertly prepared to take the AP exam.</p>			

Course Title:	AP United States Government and Politics		
Course Code:	S4050xx	Grade Level(s):	12
Prerequisite(s):	Required		
Course INFO:	1 Semester / 5 Units		
HS Graduation Credit:	Social Science / Elective		
UC / CSU:	(a)/g	Honors:	Yes (AP)
<p>There are two major, broad, and complementary goals for this course: to be the capstone of secondary social studies education and to prepare for the AP American Government and Politics exam, and the economics final exam. This course will emphasize topics appropriate for a comprehensive introduction to government and politics and to economics and to serve as a way to connect life to local and global communities. Unlike most history surveys, this course is not organized chronologically and it does not revolve around questions of interpreting the past. This course involves an examination of the rules of the game (i.e. constitutional structures), the players (politicians, political parties, and other elites), how the game is being played (political strategy in elections and within the government) and what the game is all about in the first place (the nature of democracy, the future of our society, a person's place in it).</p>			

Course Title:	Economics		
Course Code:	S4100xx	Grade Level(s):	12
Prerequisite(s):	Required		
HS Graduation Credit:	Social Science / Elective		
Course INFO:	Semester / 5 Units		
UC / CSU:	(a)/g	Honors:	No
<p>In this course, students will master fundamental economic concepts, applying the tools (graphs, statistics, equations) from other-subject areas to the understanding of operations and institutions of economic systems. Studied in a historic context are the basic economic principles of micro and macro economics, international economics, comparative economic systems, measurement, and methods.</p> <p>The goal of this course is to make you a more consistently happy person. To explain: Economics is the study of choices we make. Every time you make a choice, you are unconsciously using economics. The point of this course is to make those choices more thoughtful and manageable, so that you can make better choices and be more happy. Economics is a course that combines a bit of everything: Philosophy, Government, Mathematics, and History. This Economics course is one semester, and it covers issues ranging from personal investment to global economic policy.</p>			

Course Title:	AP Psychology		
Course Code:	S5050XX	Grade Level(s):	12
Prerequisite(s):	Biology, Chemistry		
HS Graduation Credit:	Social Science / Elective		
Course INFO:	Semester		
UC / CSU:	a/g	Honors:	No
<p>The purpose of the AP Psychology course is to teach students to critically analyze incoming information and to expose them to the history of the subject. In order to understand the different perspectives and approaches that are being used by psychologists today, this class will use activities and experiments that highlight the critical aspects of psychological theory and practice. The main objectives of this class are to instill students with a desire for knowledge, the drive to think for themselves, and the ability to influence social change.</p>			

Figure 1 Social Sciences, UC “a” Typical Course Flow Chart



English Language Department, UC / CSU Content Area “b”

The English Department course offerings are listed in Table 2 with the course descriptions following it.

Table 2 English Language Department Course Offerings (UC “b”)

Course	Course Code	Grade Level
English 7	E0700xx	7
English 8	E0800xx	8
English 9 “b”	E1000xx	9
English 10 “b”	E2000xx	10
English 11 “b”	E3000xx	11
AP English Literature and Composition “b” / ”g” if more than 4 years of “b” credits	E3050xx	11 / 12
English 12 “b”	E4000xx	12
AP English Language and Composition “b” / ”g” if more than 4 years of “b” credits	E4050xx	12 / 11
Journalism “b” or “g”	E6000xx	9-12

Course Title:	English 7		
Course Code:	E0700xx	Grade Level(s):	7
HS Graduation Credit:	N/A		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	N/A	Honors:	No
<p>7th Grade English is a yearlong course designed to develop and support students into becoming lifelong readers and writers. To accomplish this goal, all students will focus their learning and skill development reading, writing, listening, and speaking. Writing portfolios, journals, response to literature applications and daily language are focuses in the area of writing. By the end of 7th grade, students should be able to write in complete sentences, list the parts of the paragraph format that will be used throughout different grade levels, and write a well-developed full paragraph. Independent reading will also be required from 7th grade students at UPA, and the teacher will strive to provide students with the opportunity to read books on their individual reading level and to respond to them appropriately.</p>			

Course Title:	English 8		
Course Code:	E0800xx	Grade Level(s):	8
HS Graduation Credit:	N/A		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	N/A	Honors:	No
<p>One of the main goals in 8th grade English is to build skills in reading comprehension through reading a variety of novels and conducting discussions in class. Later in the year, students will be required to read non-fiction writing, which they will tie into developing their speech and listening skills. Writing is also a huge part of the class and will be included in their daily activity. By the end of 8th grade, students should be able write two well-developed full paragraphs that use text to support ideas and statements.</p>			

Course Title:	English 9		
Course Code:	E1000xx	Grade Level(s):	9
Prerequisite(s):	None		
HS Graduation Credit:	Language Arts		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	b	Honors:	No
<p>English 9 is a combined program involving the study of literature, composition, grammar, mechanics, and vocabulary. Emphasis is placed on building skills in both reading and writing with college preparation driving instruction. Core works of literature are identified in key genres, such as drama, novels, short stories, poetry, and non-fiction so that students may experience reading and interpreting varied styles of literature. The writing domain of response to literature (interpretive essay) is emphasized with the intent that students will show understanding, provide textual support, and address the abstractions, nuances, and complexities in a work of literature.</p>			

Course Title:	English 10		
Course Code:	E2000xx	Grade Level(s):	10
Prerequisite(s):	Successful completion of 9 th grade English.		
HS Graduation Credit:	Language Arts		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	b	Honors:	No
<p>English 10 is a high school sophomore level course that is designed to prepare students for the rigor of preparation for college. Students will read and analyze poetry, short stories, novels, drama, and nonfiction. Students will be asked to analyze and compare works in relation to theme, character, historical influence, and literary devices. Students will develop expository essays that fully support a clear thesis statement using facts, examples, or quotes from literature. Viewing and mimicking various writing styles will be explored and developed. Employing a more precise academic writing vocabulary will be expected of all students. The development of speaking and listening skills to express ideas, to support an argument, and to clarify information will be essential to the full education of the student. Students will concentrate on writing domains of interpretation and persuasion with an emphasis on editing skills.</p>			

Course Title:	English 11		
Course Code:	E3000xx	Grade Level(s):	11
Prerequisite(s):	Successful completion of 10 th grade English.		
HS Graduation Credit:	Language Arts		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	b	Honors:	No
<p>English 11 is a review of American literature from oral tradition through contemporary. The student will study the characteristics of the different eras and genres including non-fiction, short stories, poetry, novels and drama from various American authors. Vocabulary will be developed through the study of words from assigned literature to an outside vocabulary text. The writing process will be integral in this course. Students will continue to develop proficiency in persuasive, narrative, and response to literature essays. The students will write a research paper integrating the time period evident in a novel written by an American author.</p>			

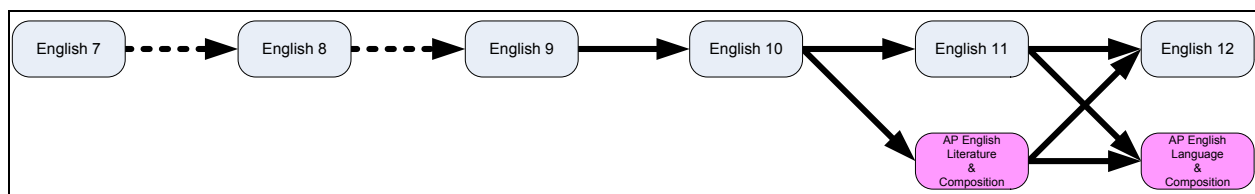
Course Title:	AP Literature and Composition		
Course Code:	E3050xx	Grade Level(s):	11 recommended or 12
Prerequisite(s):	Grade of “B” or higher with completion of 10 th grade English OR teacher recommendation.		
HS Graduation Credit:	Language Arts		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	b	Honors:	Yes (AP)
<p>Students who take this course will read a variety of literature from poetry, short stories, novels, and drama. It is expected that students will enter the class having had exposure to all of these genres before but students will be expected to hone their skills in close reading as well as writing for analysis while understanding diction, style, symbols, tone, and voice to name a few. Students will be responding to questions in the form of timed writing, creative writing assignments in which vocabulary development will be explored, a research paper requiring synthesis of various sources, personal statement for the college application, and interpretation and analysis of various genres. Students will be expected to learn to revise, edit, and proofread their work as well as serve as a peer editor.</p> <p>This course is designed to be a college-level course on a high school campus and will prepare the student for the rigors of a college English class. There will be plenty of writing, reading, questioning, and arguing with the hopes that the students will learn to think for themselves rather than be told the answers.</p>			

Course Title:	English 12 – Film Analysis		
Course Code:	E4000xx	Grade Level(s):	12
Prerequisite(s):	Successful completion of 11 th grade English.		
HS Graduation Credit:	Language Arts		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	B	Honors:	No
<p>This course is designed to teach a wide range of literacy skills through viewing film as a text. The context of the course teaches both the history and cultural significance of cinema in the United states, a range of film genres including: documentary film, animated film, foreign film, and experimental film. The course is also designed to teach the technical aspects of filmmaking and critical approaches to film analysis. Students are then asked to apply these viewing “lenses” to the films watched in class. Technical aspects of filmmaking will include: characterization, lighting, art direction and visual design, cinematography, sound, color, and visual effects. Critical approaches to film will include: symbolism, Auteur theory, multiculturalism in film, gender representations in film, and a psychoanalytical approach to film. In accordance with Common Core States Standards, this course asks students to analyze the purpose of a film, how the film achieves that purpose, why that purpose is significant to the canon of film history, and what further meaning can be extracted from viewing the film. In addition, the students will have the opportunity to apply this knowledge to the writing, storyboarding, filming, and editing of a film they produce themselves. The course will also include ongoing vocabulary work.</p>			

Course Title:	AP Language and Composition		
Course Code:	E4050xx	Grade Level(s):	12 recommended or 11
Prerequisite(s):	Grade of “B” or higher with completion of 11 th grade English OR teacher recommendation.		
HS Graduation Credit:	Language Arts		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	b	Honors:	Yes (AP)
<p>Following the suggested format of AP Central, students who take this course will look at the structure and message of all writing concentrating more on the non-fiction aspect of message. Students will practice these structures specifically in relation to tone, voice, vocabulary usage to name a few. Students will practice synthesizing information in practice for continued work with research-based essays using multiple sources to support their writing. Students will also practice and apply their personal statements for college and scholarship writing.</p> <p>This course is designed to be a college-level course on a high school campus and will prepare the students for the rigors of English post high school. There will be plenty of writing, reading, debating, and questioning.</p>			

Course Title:	Journalism		
Course Code:	E6000xx	Grade Level(s):	9-12
Prerequisite(s):	None.		
HS Graduation Credit:	Language Arts/Elective		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	b	Honors:	No
<p>Students will demonstrate a clear understanding of the legal and ethical issues surrounding journalism and news media in society and at the high school level. Additionally, they will learn how to write in a variety of styles used in newspapers and magazines, including feature writing, news writing, opinion writing, and specialty writing (entertainment, sports, etc.). Students will learn how to generate questions, interview and evaluate sources, and gather reliable information. Students will synthesize information from research and interviews, as well as first-hand observations, and write clear, compelling articles in appropriate formats depending on the objectives.</p> <p>Students will read case laws surrounding student press freedoms, as well as theory surrounding journalism's role in a democratic society. They will also read a variety of journalistic styles, including standard news and feature articles, profiles, and editorials. Reading the articles will serve as a teaching tool for students discern the characteristics of each type, and then attempt to replicate those characteristics in their own writing. Articles about the current state of press freedoms both in America and around the world will be addressed and used as foundations for discussions.</p>			

Figure 2 English, UC "b" Typical Course Flow Chart



Mathematics Department, UC / CSU Content Area “c”

The Mathematics Department course offerings are listed in Table 3 course descriptions following it.

Table 3 Mathematics Department Course Offerings (UC “c”)

Course	Course Code	Grade Level
Math 7	M0750XX	7
Math 8	M0850XX	7-8
Integrated Math 1 “c” / “g”	M1050XX	9
Integrated Math 2 “c” / “g”	M2050XX	10
Integrated Math 3 “c” / “g”	M3050xx	9–11
Pre-Calculus “c” / “g”	M4000XX	11-12
Pre-Calculus Honors “c” / “g”	M4010xx	11–12
Statistics “c” / “g”	M4050xx	11–12
AP Calculus AB “c” / “g”	M5050xx	11–12
AP Calculus BC “c” / “g”	M5060xx	11-12
Introduction to Computer Science “c” / “g”	M6000xx	9-12
AP Computer Science “c” / “g”	M6050xx	11-12

Course Title:	Math 7		
Course Code:	M0750XX	Grade Level(s):	7
HS Graduation Credit:	N/A		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	N/A	Honors:	No
<p>Students will perform operations on rational numbers and proportional equations. They will manipulate simple algebraic expressions for solve one variable equations. In an introduction to geometric reasoning, they will create 2 and 3 dimensional figures to help determine surface area and volume. And they will begin an exploration of statistical analysis on population data using measures of central tendency and variability.</p>			

Course Title:	Math 8		
Course Code:	M0850XX	Grade Level(s):	8
HS Graduation Credit:	N/A		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	N/A	Honors:	No
<p>Students will begin exploration of irrational numbers, including comparing operations on rational/irrational numbers. They will be exposed to a thorough understanding of linear functions, analyzing these functions algebraically, graphically, numerically and verbally. Students will gain a beginning understanding of transformational isometries by rotating, reflecting and translating polygons, which will ultimately lead to an understanding of congruence and similarity, particularly of triangles. The Pythagorean Theorem of right triangles is presented and used to solve right triangle segment lengths. Using scatter plot of bivariate data, students will make assumptions of patterns of association between data sets.</p>			

Course Title:	Integrated Math 1		
Course Code:	M1050XX	Grade Level(s):	9
HS Graduation Credit:	Mathematics		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	Pending	Honors:	No
<p>In this first high school math class, students will extend their understanding of functions to include function notation, an initial understanding of domain/range and an elementary exploration of linear and non-linear functions, algebraically, graphically, numerically and verbally. Linear equations and inequalities in one and two variables will be used to solve real world situations. Understanding of transformational geometry will lead to the beginning of the deductive proofs of theorems involving lines, angles, triangles and parallelograms. Students in the course will continue explorations in statistical data, incorporating analyses of correlation to the bivariate data presented.</p>			

Course Title:	Integrated Math 2		
Course Code:	M1060XX	Grade Level(s):	9 or 10
Prerequisite(s):	Successful completion of Integrated Math 1 with a C or higher		
HS Graduation Credit:	Mathematics		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	c	Honors:	No
<p>Integrated Math 2 is the second of a three year integrated math sequence that will help students see the relationships between algebra, geometry, and statistics. In this course students are introduced to exponential and quadratic functions and learn to compare them to linear functions that were studied in Integrated Math 1. Students see that quadratics can be used to represent conics, like circles and parabolas. Students will understand that writing functions and expressions in different forms can reveal key features that can be used to guide the solving of problems.</p> <p>Students use the distance formula and the Pythagorean Theorem from Integrated Math 1 to aide in modeling them. Students will be introduced to the complex number system and explore the relationships between the real and complex systems.</p> <p>Students continue to work with data and probability in this course. They will see the connection between the two by studying conditional probability and use probability models to make informed decisions.</p> <p>Students will build on prior work with dilations and proportionality to build a formal understanding of similarity. Students will use similar triangles to understand right triangle trigonometry. Students will learn and understand how to construct a formal geometric proof and use the learned techniques to prove many geometric theorems. Students will establish formulas to solve problems involving circles and the volume of cylinders, pyramids, and cones.</p>			

Course Title:	Integrated Math 3		
Course Code:	M3050xx	Grade Level(s):	10 th or 11 th
Prerequisite(s):	Successful completion of Integrated Math 1 and 2		
HS Graduation Credit:	Mathematics		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	c	Honors:	No
<p>In this third high school math class, students will focus on a deeper understanding of functions, including linear equations and inequalities, quadratic equations and how these relate to conic sections, polynomial equations in real and complex solutions and rational expressions and equations. Students will be introduced to exponential and logarithmic equations, including the properties of each. Students will continue their exploration of data analysis, particularly as it applies to understanding and evaluating random processes underlying statistical experiments. Geometric principles of similarity in right triangles will extend to an early exploration of trigonometry.</p>			

Course Title:	Pre-Calculus		
Course Code:	M4000XX	Grade Level(s):	11 or 12
Prerequisite(s):	Passage of Integrated Math 3 with a C or higher		
HS Graduation Credit:	Mathematics		
Course INFO:	2 Semesters / 5 Units per Semester		
UC/CSU:	c	Honors:	No
<p>Precalculus is a preparatory course for AP Calculus. This course is offered to students who demonstrate depth of understanding of functions, trigonometry, logarithms, polynomials, rational notation, and probability concepts. The intent of the course is to develop skill and understanding of the language of functions, analytic geometry, sequences and series, complex numbers, vectors, and limits.</p> <p>Through the study and use of Precalculus, the learner develops an understanding of the symbolic language of mathematics and the sciences. Precalculus develops the skills and concepts to help solve a wide variety of real-life applications in the sciences.</p>			

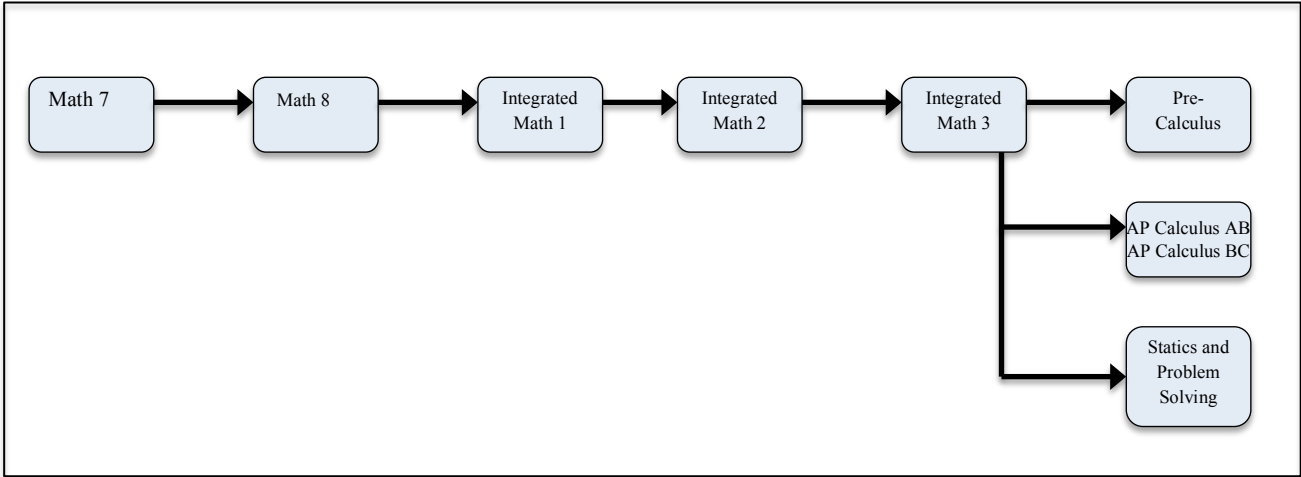
Course Title:	Statistics and Problem Solving		
Course Code:	M4050xx	Grade Level(s):	11 or 12
Prerequisite(s):	Successful completion of Integrated Math 3 or higher		
HS Graduation Credit:	Mathematics		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	c	Honors:	No
<p>Statistics and Problem Solving is offered to students who are pursuing non-math/non-science college majors. It is designed to develop problem-solving skills and to introduce students to the basic concepts of Statistics and Probability. This course emphasizes developing understanding of statistical concepts and the ability to analyze real data, integrating technology to help achieve both of these goals. Through the study and use of Statistics and Probability, the learner develops an understanding of the symbolic language of mathematics and the sciences. Statistics and Problem Solving develops the skills and concepts to help solve a wide variety of problems.</p>			

Course Title:	AP Calculus (AB)		
Course Code:	M5050xx	Grade Level(s):	11 or 12 recommended
Prerequisite(s):	"B–" or higher in Integrated Math 3 and Pre-Calculus Honors or teacher recommendation		
HS Graduation Credit:	Mathematics		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	c	Honors:	Yes (AP)
<p>(All students should download the AP Calculus course description booklet from URL http://www.collegeboard.com). This course provides a comprehensive introduction to calculus comparable to one or more semesters at the college level. The material is challenging and corresponds with the syllabus of the College Board Advanced Placement Program. Calculus is considered a fundamental tool in many fields of study including science, business, and engineering. This course emphasizes the concepts of differential and integral calculus and provides experience in the methods and applications of these concepts. All concepts will be studied graphically, numerically, analytically and verbally. Graphing calculators are used extensively. A detailed list of course topics can be found in the official AP Calculus course.</p>			

Course Title:	AP Calculus (BC)		
Course Code:	M5060xx	Grade Level(s):	11 or 12 recommended
Prerequisite(s):	Pass AP Calculus BC or by teacher recommendation		
HS Graduation Credit:	Mathematics		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	c	Honors:	Yes (AP)
<p>This course covers every topic in the College Board’s AP Calculus BC course description. All AP Calculus AB material is covered and more--all of which is approximately equivalent to one full year of college level calculus. This includes many beginning calculus topics; from the basics of limits, to extensive investigations of differentiation and integration. Additional topics, unique to the BC course, include: calculus of parametric, polar, and vector functions; Euler's Method; integration by parts and partial fractions; improper integrals; logistic differential equations; and an extensive study of infinite series. Special emphasis is given to explorations of topics through four key lenses (the “Rule of Four”): analytic, numerical, graphical and verbal or written.</p>			

Course Title:	Introduction to Computer Science		
Course Code:	M6000XX	Grade Levels:	9-12
Prerequisite(s):	N/A		
HS Graduation Credit:	Mathematics		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	“g”	Honors:	No
<p>This course will introduce students to computer science, with a focus on building algorithms through computer programming. Students will also read and write about issues surrounding the implications of data and information in society. The objectives of this course are that students will a) develop computer programming skills such as abstraction, logic, and algorithmic thinking. b) become prepared for the Computer Programming AP course and c) increase their awareness of computer science as a career and life skill. Students will work with a drag-and-drop visual programming language called SNAP (derived from SCRATCH). This course is modeled after the course CS10: The Beauty and Joy of Computing at UC Berkeley.</p>			

Figure 3 Mathematics, UC “e” Typical Course Flow Chart



Science Department, UC / CSU Content Area “d”

The Science Department course offerings are listed in Table 4 with course descriptions following it.

Table 4 Science Department Course Offerings (UC “d”)

Type	Course	Course Code	Grade Level
Life Sciences	Life Science	Q0700xx	7
	Biology “d” / “g”	Q1000xx	9–10
	AP Biology / Lab (2 class periods) “d” / “g”	Q1050xx / Q1055xx	11–12
	Marine Biology “d” / “g”	Q6000xx	11–12
Physical Sciences	Physical Science	Q0800xx	8
	Chemistry “d” / “g”	Q2000xx	10–11
	Chemistry Honors “d” / “g”	Q2010xx	10–11
	AP Chemistry / Lab (2 class periods) “d” / “g”	Q2020xx	11-12
	Physics “d” / “g”	Q3000xx	11–12
	AP Environmental Sciences “d” / “g”	Q4000xx	11-12
Project Lead The Way (Science, Technology, Engineering, and Math Courses)	Gateway To Technology	Y1000X8	7–8
	Principles of Biomedical Sciences “d” / “g”	Q1150XX	9–12
	Introduction to Engineering Design “g”	Y1000XX	9-12
	Principles of Engineering “g”	Y1200XX	9-12
	Digital Electronics “g”	Y1600XX	9-12
	Human Body Systems “d” / “g”	Q1170XX	9-12
	Medical Interventions “d” / “g”	Q5400XX	11-12
	Biomedical Innovations “d” / “g”	Q5500XX	12

Life Sciences

Course Title:	Life Science		
Course Code:	Q0700xx	Grade Level(s):	7
HS Graduation Credit:	N/A		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	N/A	Honors:	N/A
<p>Life Science is a fundamental biology class designed to provide a broad understanding of the living world in which we exist and the world within our bodies. It examines the fundamental principles of cell biology, Mendelian genetics, classification, evolution, the basic anatomy and physiology of organisms, and human body systems. Connections to physical and earth sciences are also explored. The curriculum for this course aligns with the California State Content Standards. Coursework includes hands on laboratory activities and investigations, class lectures and discussions, reading and writing assignments, and several individual and group projects. This course offers a setting for the student to learn more about the self and our place in the amazing miracle of life.</p>			

Course Title:	Biology		
Course Code:	Q1000xx	Grade Level(s):	9 recommended or 10
Prerequisite(s):	Recommended "C-" or higher in Integrated Math 1		
HS Graduation Credit:	Science		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	d/g	Honors:	No
<p>Biology isn't just a subject in school; it's the science of life itself! This course will take students through a study of the human body, cells, DNA, RNA, genetics, evolution, ecology, and the brain. It will consist of both individual and group work, as well as have heavy focus on laboratory experimentation. Students will use their knowledge of the scientific method to work through problems and observations made throughout the year, as well as to create their own experiments.</p>			

Course Title:	Advanced Placement Biology		
Course Code:	Q1050xx	Grade Level(s):	11 or 12
Prerequisite(s):	“B+” in Chemistry or “B–“ in Chemistry Honors and “B+” in Biology and concurrent standing in Integrated Math 3.		
HS Graduation Credit:	Science		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	d/g	Honors:	Yes (AP)
<p>AP Biology is the equivalent of an introductory level college biology course. The emphasis of this curriculum is to prepare students for the AP Biology exam. Students will be engaged in materials that will prepare them for the rigor and material load of a college level course. The ability to cover material and make overarching connections is a critical skill at the college level. Students will be required to manage their time and focus of study to apply the material to problem solving and understanding the connections of functionality of biological concepts. The student will need to practice communicative skills through free-response questions that will show their understanding of complex problems in Biology. Along with written practice students will need to be able to answer high-level inquiry-based multiple choice questions based on the concepts of the major biological themes. Students will perform required labs that will allow them to practice the use and technique, of applicable inquiry-based technology. Students will be required to critically think about the setup and function of the equipment and materials as to best obtain a meaningful result from their application.</p> <p><i>*Requires a zero period lab.</i></p>			

Course Title:	Marine Biology		
Course Code:	Q6000xx	Grade Level(s):	11 or 12
Prerequisite(s):	Successful completion of Biology, Chemistry, and Integrated Math 1. Completion of Biology, Chemistry and Integrated Math 1 with a “B” or better recommended.		
HS Graduation Credit:	Science		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	d/g (pending)	Honors:	Yes (AP)
<p>This is an in depth study of marine life, physical oceanography, and the impact of human activity on the oceans. This course is designed for students with an interest in marine biology and oceanography. This course provides an excellent background for students who are interested in further study of the oceans and the organisms that inhabit it. Major concepts include the study of: the interrelationship of marine and terrestrial environments, the geology of the oceans, marine organisms, and the ecology of coral reefs. Laboratory activities, including the examination of marine specimens are utilized throughout this course to build upon student knowledge. The course text is Marine Biology by Castro and Huber. The Marine Biology Coloring Book is also used as a course text. Both textbooks are written for introductory level college courses. Outside reading and independent fieldwork are REQUIRED parts of the class. Science communication work using readings, writing, computer presentation, labs, and scientific illustrations is also required. Field work at the Monterey Bay Aquarium and/or Año Nuevo State Park is a required part of the curriculum. Students will have additional opportunities such as the Inter-tidal Monitoring Project, and Sand Crab Monitoring. Students are expected to be self- motivated and interested in learning about marine environments. This course satisfies a life science lab class requirement for entrance into the University of California.</p>			

Physical Sciences

Course Title:	Physical Science		
Course Code:	Q0800xx	Grade Level(s):	8
HS Graduation Credit:	N/A		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	N/A	Honors:	No
<p>Physical science is the area of focus in eighth grade. Students study topics in physics such as motion, forces, and the structure of matter. Earth, the Solar System, chemical reactions, chemistry of biological processes, The Periodic Table, and density and buoyancy are also topics that eighth grade students should learn. Students should begin to grasp four concepts that help to unify physical science: force and energy; the laws of conservation; atoms, molecules and the atomic theory; and kinetic theory. Mastery of the eighth grade physical science content will greatly enhance the ability of students to succeed in high school science classes.</p>			

Course Title:	Chemistry		
Course Code:	Q2000xx	Grade Level(s):	10 recommended or 11
Prerequisite(s):	Successful completion of Biology and Integrated Math 1. Concurrent enrollment in Integrated Math 2 or higher-level Mathematics.		
HS Graduation Credit:	Science		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	d/g	Honors:	No
<p>In this course students learn and apply the fundamental concepts and principles of chemistry. Areas of study include: changes in matter and energy, atomic theory and molecular structure, chemical bonding, chemical reactions, conservation of matter and stoichiometry, states of matter, gases and their properties, solutions, acids and bases, reaction rates and chemical equilibrium, organic chemistry and nuclear processes. The course utilizes a guided inquiry approach where students ask questions, predict outcomes, develop experiments and develop evidence-based conclusions. Students develop skills for using scientific tools, techniques and the investigative processes of science.</p>			

Course Title:	Chemistry Honors		
Course Code:	Q2010xx	Grade Level(s):	10 recommended or 11
Prerequisite(s):	B or greater in Integrated Math 1 and concurrent enrollment in Integrated Math 2		
HS Graduation Credit:	Science		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	d/g	Honors:	Yes
<p>This is a rigorous, standards based first-year course, which addresses the concepts and principles of chemistry. Emphasis is placed on quantitative analysis of complex problems in chemical systems. Areas of study include: matter and energy, atomic theory, molecular structure, periodic law, chemical bonding, chemical reactions, stoichiometry, kinetics, gases and their properties, solutions, acids and bases, thermochemistry, reaction rates, chemical equilibrium, organic and biochemistry, and nuclear processes. Students conduct laboratory investigations to test and apply their understanding of chemical principles and to develop skills for using scientific tools, techniques and the investigative processes of science.</p>			

Course Title:	AP Chemistry		
Course Code:	Q2010xx	Grade Level(s):	10 recommended or 11
Prerequisite(s):	Successful completion of Chemistry with a “B” or better. Concurrent enrollment in higher-level Mathematics; Integrated Math 3 strongly recommended.		
HS Graduation Credit:	Science		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	d/g	Honors:	Yes
<p>AP Chemistry is designed to be the equivalent of the general chemistry course usually taken during the first year of college. For most students, the course enables them to undertake, as a freshman, second year work in the chemistry sequence at their institution or to register in courses in other fields where general chemistry is a prerequisite. This course is structured around the big ideas articulated in the AP Chemistry curriculum framework provided by the College Board. A special emphasis will be placed on the seven science practices, which capture important aspects of the work that scientists engage in, with learning objectives that combine content with inquiry and reasoning skills. AP Chemistry is open to all students that have completed a year of chemistry who wish to take part in a rigorous and academically challenging course, have completed with at least a “B” Algebra II, and concurrent pre-calculus enrolled. This course required a zero period twice per week. The Big Ideas covered are 1: Structure of matter, 2: Properties of matter-characteristics, states, and forces of attraction , 3: Chemical reactions, 4: Rates of chemical reactions, 5: Thermodynamics, 6: Equilibrium, and 7 Electrochemistry.</p> <p><i>*Requires a zero period lab.</i></p>			

Course Title:	Physics		
Course Code:	Q3000xx	Grade Level(s):	11 or 12
Prerequisite(s):	Recommended successful completion of Integrated Math 3 with a C or better.		
HS Graduation Credit:	Science		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	d/g	Honors:	No
<p>The purpose of the Physics class is to: engage students in the practice of inquiry and discourse we call science; to promote a better understanding of the nature of science; to cultivate habits of mind that promote effective problem solving and critical thinking; and to equip students with a deep understanding of physics concepts in a way that is relevant and meaningful. Students should walk away from this course able to independently design and conduct their own experiments, and see science as more than just a body of knowledge, but a way of engaging with the world.</p>			

Course Title:	Advance Placement Environmental Science		
Course Code:	Q4000xx	Grade Level(s):	11 or 12
Prerequisite(s):	Successful completion of Biology, Chemistry, and Integrated Math 1. Completion of Biology, Chemistry and Integrated Math 1 with a “B” or better recommended.		
HS Graduation Credit:	Science		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	d/g	Honors:	Yes (AP)
<p>Advanced Placement Environmental Science (APES), is designed to be the equivalent of a one semester college level course in environmental science. The goal of the course is to provide students with the scientific principles, concepts and methodologies required to understand the inter-relationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. The APES course is interdisciplinary; it embraces a wide variety of topics across several disciplines, including biology, chemistry, ecology, earth science and social science. Laboratory and field investigations are designed to complement the textbook and lecture portion of the class. Students will develop data collection, sampling and analysis procedures and use appropriate mathematical calculations to analyze and present data.</p>			

Project Lead the Way Curriculum – Science, Technology, Engineering and Math (STEM)

<p>Project Lead The Way (Science, Technology, Engineering, and Math Courses)</p>	<p>Gateway To Technology (8)</p> <p>Prerequisites: None</p> <p>Course Description:</p> <p>The PLTW Gateway To Technology (GTT) program features a project-based curriculum designed to challenge and engage the natural curiosity and imagination of middle school students. They envision, design and test their ideas with the same advanced modeling software used by companies like Lockheed Martin, Intel and Sprint. They study mechanical and computer control systems; think robotics and animation. Students also explore the importance of energy, including innovative ways to reduce, conserve and produce it using solar, thermal and wind power. The knowledge that students gain and the skills they build from GTT create a strong foundation for further STEM learning in high school and beyond.</p> <p>Throughout GTT, students acquire knowledge and skills in problem solving, teamwork and innovation as well as explore STEM careers. Taught in conjunction with a rigorous academic curriculum, the program is divided into six, nine-week independent units, assuming a 45-minute class period. Schools implement both foundation units and may add any combination of the specialization units.</p>
	<p>Principles of Engineering “g”</p> <p>Pre-Requisite: Successful completion of Introduction to Engineering Design</p> <p>Course Description:</p> <p>POE is a high school-level survey course of engineering. The course exposes students to some of the major concepts that they will encounter in a postsecondary engineering course of study. Students have an opportunity to investigate engineering and high tech careers. POE gives students the opportunity to develop skills and understanding of course concepts through activity-, project-, and problem-based (APPB) learning. Used in combination with a teaming approach, APPB learning challenges students to continually hone their interpersonal skills, creative abilities, and problem solving skills based upon engineering concepts. It also allows students to develop strategies to enable and direct their own learning, which is the ultimate goal of education.</p> <p>To be successful in POE, students should be concurrently enrolled in college preparatory mathematics and science. Students will employ engineering and scientific concepts in the solution of engineering design problems. Students will develop problem-solving skills and apply their</p>

knowledge of research and design to create solutions to various challenges. Students will also learn how to document their work and communicate their solutions to their peers and members of the professional community.

Principles Of Engineering is the second of three foundation courses in the Project Lead The Way high school engineering program. The course applies and concurrently develops secondary level knowledge and skills in mathematics, science, and technology.

The course of study includes:

- Mechanisms
- Energy Sources
- Energy Applications
- Machine Control
- Fluid Power
- Statics
- Material Properties
- Material Testing
- Statistics
- Kinematics

Principles of Biomedical Sciences “d” / “g”

Course Description:

Students investigate various health conditions including heart disease, diabetes, sickle-cell disease, hypercholesterolemia, and infectious diseases. They determine the factors that led to the death of a fictional person, and investigate lifestyle choices and medical treatments that might have prolonged the person’s life. The activities and projects introduce students to human physiology, medicine, and research processes. This course provides an overview of all the courses in the Biomedical Sciences program and lay the scientific foundation for subsequent courses. This course is designed for 9th or 10th grade students.

Introduction to Engineering Design “g”

Course Description:

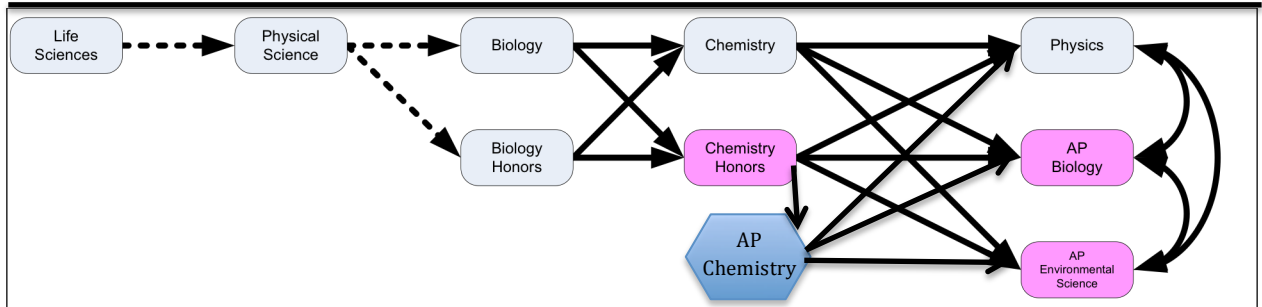
This survey course exposes students to major concepts they’ll encounter in a post-secondary engineering course of study. Topics include mechanisms, energy, statics, materials, and kinematics. They develop problem-solving skills and apply their knowledge of research and design to create solutions to various challenges, document their work and communicate solutions.

Human Body Systems “d” / “g”

	<p>Course Description:</p> <p>Pre-Requisite: Successful completion of Principles of Biomedical Science</p> <p>Students examine the interactions of body systems as they explore identity, communication, power, movement, protection, and homeostasis. Students design experiments, investigate the structures and functions of the human body, and use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration. Exploring science in action, students build organs and tissues on a skeletal manikin, work through interesting real world cases and often play the role of biomedical professionals to solve medical mysteries.</p>
	<p>Digital Electronics “g”</p> <p>Course Description:</p> <p>Pre-Requisite: Successful completion of Principles of Engineering</p> <p>From smart phones to appliances, digital circuits are all around us. This course provides a foundation for students who are interested in electrical engineering, electronics, or circuit design. Students study topics such as combinational and sequential logic and are exposed to circuit design tools used in industry, including logic gates, integrated circuits, and programmable logic devices.</p>
	<p>Medical Interventions</p> <p>Course Description:</p> <p>Pre-Requisite: Successful completion of Human Body Systems</p> <p>Students follow the life of a fictitious family as they investigate how to prevent, diagnose, and treat disease. Students explore how to detect and fight infection; screen and evaluate the code in human DNA; evaluate cancer treatment options; and prevail when the organs of the body begin to fail. Through real-world cases, students are exposed to a range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics.</p>
	<p>Biomedical Innovation</p> <p>Course Description:</p> <p>Pre-Requisite: Successful completion of Medical Interventions</p> <p>In the final course of the PLTW Biomedical Science sequence, students build on the knowledge and skills gained from previous courses to design innovative solutions for the most pressing health challenges of the 21st century. Students address topics ranging from public health and biomedical engineering to clinical medicine and physiology. They have</p>

the opportunity to work on an independent design project with a mentor or advisor from a university, medical facility, or research institution.

Figure 4 Sciences, UC “d” Typical Course Flow Chart



World Language Department, UC / CSU Content Area “e”

The Foreign Language Department course offerings are listed in Table 5 with the course descriptions following it.

Table 5 World Language Department Course Offerings (UC “e”)

Course	Course Code	Grade Level
Spanish 1 “e”	F1000xx	8–10
Spanish 2 “e”	F2000xx	8–11
Spanish 3 “e” / “g”	F3000xx	9–12
Spanish Immersion “e” / “g”	F4000xx	10–12
AP Spanish Language and Culture “e” / “g”	F4050XX	11-12

Course Title:	Spanish 1		
Course Code:	F1000xx	Grade Level(s):	7 through 10
Prerequisite(s):	None		
HS Graduation Credit:	Foreign Language		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	e	Honors:	No
<p>This course is designed for beginning language students and students who have had less than one year of prior language study. It provides the basis for continuing study and use of Spanish throughout high school and college. With emphasis on conversation and practical application, the student is taught to understand, speak, read, and write the language. A working vocabulary is developed in context, as are the basic grammatical structures of the language. In addition to listening and oral drills, there are readings, written grammatical exercises, creative writing opportunities, and original dialogue performances. Students are introduced to culture and customs through skits, music, videos, food, and magazines.</p>			

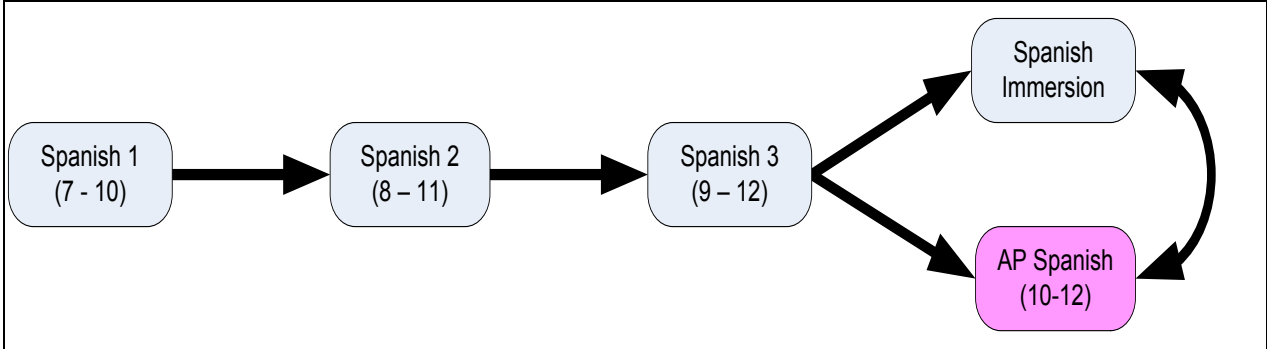
Course Title:	Spanish 2		
Course Code:	F2000xx	Grade Level(s):	8 through 11
Prerequisite(s):	Spanish I		
HS Graduation Credit:	Foreign Language		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	e	Honors:	No
<p>This course continues the work of the first year in all four-language skills: speaking, comprehending, reading, and writing. The goal of the second year is to give students a working knowledge of Spanish. Contemporary topics, vocabulary, and culture are stressed. A variety of activities, including skits, food days, and videos, are included to enhance students' understanding of life in foreign countries and their use of the language.</p>			

Course Title:	Spanish 3		
Course Code:	E3000xx	Grade Level(s):	9 through 12
Prerequisite(s):	Spanish II		
HS Graduation Credit:	Foreign Language		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	e/g	Honors:	No
<p>At this level, students use more sophisticated language structure than in the first two years. Class work is conducted mostly in Spanish. Students are exposed to a wider range of vocabulary, to conversation, and to more in-depth original expression (impromptu and prepared) in both oral and written form. They continue their study of culture reinforced by reading original works, seeing films and videos, creating skits, and interacting with native speakers.</p>			

Course Title:	Spanish Immersion (Spanish for Spanish Speakers)		
Course INFO:	2 Semesters / 5 Units per Semester		
Course Code:	F4000xx	Grade Level(s):	10 through 12
Prerequisite(s):	Spanish 3 or teacher recommendation		
HS Graduation Credit:	Foreign Language		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	e/g	Honors:	No
<p>Spanish for Spanish Speakers is a course designed to improve and further language for native or near native speakers of Spanish. Using a variety of materials, activities, and evaluations the course will allow students to develop their oral and written language skills. In addition, it will strengthen reading comprehension. We will be focusing on “Standard Spanish” and exploring the variations in the dialect throughout Latin America. Special attention will be given to spelling, accents, grammar, and vocabulary building.</p>			

Course Title:	AP Spanish Language and Culture		
Course Code:	F4050XX	Grade Level(s):	11-12
Prerequisite(s):	Successful completion of Spanish 3 - Required		
HS Graduation Credit:	Foreign Language		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	e/g	Honors:	Yes (AP)
<p>The AP Spanish Language and Culture course emphasizes communication (understanding and being understood by others) by applying interpersonal, interpretive, and presentational skills in real-life situations. This includes vocabulary usage, language control, communication strategies, and cultural awareness. The AP Spanish Language and Culture course strives not to overemphasize grammatical accuracy at the expense of communication. To best facilitate the study of language and culture, the course is taught almost exclusively in Spanish. The AP Spanish Language and Culture course engages students in an exploration of culture in both contemporary and historical contexts. The course develops students' awareness and appreciation of cultural products (e.g., tools, books, music , laws, conventions, institutions); practices (patterns of social interactions within a culture); and perspectives (values, attitudes, and assumptions).</p>			

Figure 5 World Language, UC “e” Course Flow Chart



Visual and Performing Arts Department, UC / CSU Content Area “F”

The nation’s arts standards specify “an education in the arts is for ALL students, regardless of their background, talent, or disabilities.” UPA believes in the importance of the arts not only as a means to enrich a student’s understanding of the past and present, but also as an advanced form of communication and expression, and an academic tool to broaden a student’s ability to approach a problem or situation. Indeed, Leonardo da Vinci, perhaps the greatest inventor of modern times, used the blending of art and science in his works to communicate his learning and discoveries in a manner that would be commonly understandable. Scientists and physicians today are just now realizing the tangible benefits of da Vinci’s scientific works that he conveyed originally as art forms. Arts learning requires students to observe, analyze, synthesize, create, and evaluate. It also draws on a variety of intelligences and provides students with experience in higher order thinking.

The Visual and Performing Arts Department (Visual and Performing Arts) course offerings are listed in Table 6 with course descriptions following it.

Table 6 Visual and Performing Arts Department Course Offerings (UC “F”)

Course Type	Course	Course Code	Grade Level
Visual Arts	Art 7/8	A1050XX	7–8
	Art 1 “F”	A1000xx	9–10
	Drawing and Painting (I & II) “F” / “g”	A2000xx	10–11
	3–Dimensional Design “F” / “g”	A3000xx	11–12
	Multi Media Arts (Digital Arts)	A9050xx	10-12
Performing Arts	Drama 7/8	T5000x7 / T5000x8	7–8
	Drama 1 “F”	T5000xx	9–12
	Advanced Drama “F” / “g”	T5050xx	10–12
	Theatre Technology “F” / “g”	T5010xx	10–12
	Dance 7/8	T6000x7 / T6000x8	7–8
	Dance 1 “F”	T6000xx	9–12
	Dance 2 “F” / “g”	T6050xx	10-12
	Beginning Band	T1200x7 / T1200x8	7–12
	Band 1 (1–4) “F”	T1250x8	9–12
	Intermediate Band (7-9) “F”	T1210xx	7-9
	Advanced Band “F” / “g”	T1250xx	9-12

Visual Arts

Course Title:	Art 7/8		
Course INFO:	2 Semesters / 5 Units per Semester		
Course Code:	A1050XX	Grade Level(s):	7 or 8
HS Graduation Credit:	N/A		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	N/A	Honors:	N/A
<p>Students in this course will study many two and three-dimensional art forms such as drawing, painting, perspective, sculpture and clay relief. Emphasis will be placed on the elements and principles of art and design throughout this course. A variety of materials and processes are explored together with the appropriate reading, writing and vocabulary.</p>			

Course Title:	Art 1		
Course INFO:	2 Semesters / 5 Units per Semester		
Course Code:	A1000xx	Grade Level(s):	9 or 10
Prerequisite(s):	None		
HS Graduation Credit:	VPA / Elective		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	f	Honors:	No
<p>Students are offered the opportunity to explore various visual art forms and techniques in an introductory level course through the elements and principles of art and design. Students will be introduced to a variety of media through two-dimensional and three-dimensional approaches to creating and responding to visual arts.</p>			

Course Title:	Drawing and Painting (I & II)		
Course INFO:	2 Semesters / 5 Units per Semester		
Course Code:	A2000xx	Grade Level(s):	10 or 11 recommended, or 9–12
Prerequisite(s):	Art 1A/1B		
HS Graduation Credit:	VPA / Elective		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	f/g	Honors:	No
<p>Students will explore different approaches to drawing and painting while applying the elements and principles of design to develop skills with an emphasis on line, shape, color, value, texture and composition. A variety of mixed media will be explored. Students will be expected to develop technical skills and their own personal styles of drawing and painting. A variety of subject matter will be explored.</p>			

Course Title:	3–Dimensional Design		
Course INFO:	2 Semesters / 5 Units per Semester		
Course Code:	A3000xx	Grade Level(s):	11 or 12 recommended, 10–12
Prerequisite(s):	Art 1A/B and Drawing and Painting I&II		
HS Graduation Credit:	VPA / Elective		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	f/g	Honors:	No
<p>This course will introduce techniques of three-dimensional form through the exploration of line, plane and volume. Student work will include sculpture, found object art, relief sculpture, environmental / earth art. A variety of materials and techniques will help students create three-dimensional projects through the use of creative problem solving. The technical use and application of materials and tools will be stressed.</p>			

Course Title:	Multi Media Arts (Digital Arts)		
Course INFO:	2 Semesters / 5 Units per Semester		
Course Code:	A9050xx	Grade Level(s):	10–12
Prerequisite(s):	N/A		
HS Graduation Credit:	VPA / Elective		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	f/g	Honors:	No
<p>Multimedia is an introductory course for students who are interested in media productions that include visual design, text, graphics and animation, audio, and video components. Visual design principles will be studied and applied to student generated multimedia productions. Film, video and digital media productions will be researched and critiqued, examining the historical, cultural and technological interactions that make for compelling media. Students will participate in the media production process, including planning, production and distribution of multimedia projects. This foundation will prepare them for entry into the video production class.</p>			

Performing Arts

Course Title:	Drama 7/8 (Acting)		
Course INFO:	2 Semesters / 5 Units per Semester		
Course Code:	T5000x7 / T5000x8	Grade Level(s):	7 or 8
HS Graduation Credit:	N/A		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	N/A	Honors:	No
<p>Some students believe a Drama course is a fun and silly class where games are played, friends can socialize, and little effort is rewarded with an “easy A.” However, the true purpose of Drama is quite contrary to that—the reason why Drama courses are offered in schools is to expose youth to the craft of acting, auditioning, movement, the voice, design, and directing. Skills taught and developed in a Drama classroom could help anyone on and off the stage. Improvising, resume writing, audition training, physical and vocal warm-ups, etc could help in any field of study. Whether or not my students continue down the theatrical path in their future, this will be a beneficial experience. My promise to the students is as long as they take their work seriously and accept that every assignment, game, and scene has a bigger purpose in the long-run, then their experience will be fun and significant.</p>			

Course Title:	Drama 1 (Acting)		
Course Code:	T5000xx	Grade Level(s):	9 through 12
Prerequisite(s):	None		
HS Graduation Credit:	VPA		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	f	Honors:	No
<p>Drama 1 exposes youth to the craft of acting, auditioning, movement, the voice, design and directing. Skills taught and developed in a Drama classroom strive to better students on and off the stage. Stage and script vocabulary, improvising, resume writing, audition training, physical and vocal warm-ups are plentiful and applicable to any field of study. Whether or not students continue down the theatrical path in their future, Drama 1 will be a beneficial experience. As long as students take their work seriously and accept that every assignment, game, and scene has a bigger purpose in the long run, students' experiences will be purposeful and significant. Students are introduced to the study of drama with active class participation, projects, research, as well as class-based and public performances that are original as well as script based.</p>			

Course Title:	Advanced Drama (Advanced Acting)		
Course Code:	T5000xx	Grade Level(s):	9 through 12
Prerequisite(s):	Drama 1		
HS Graduation Credit:	VPA		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	f	Honors:	No
<p>Advanced Drama is an extension of the Drama 1 course of study.</p>			

Course Title:	Theatre Technology		
Course Code:	T5010xx	Grade Level(s):	10 through 12
Prerequisite(s):	Drama 1		
HS Graduation Credit:	VPA / Elective		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	f/g	Honors:	No
<p>Students will be exposed to design as well as crew work in a theatrical environment. Through lecture, projects, hands-on experience, and presentations, students will learn about Hair and Makeup, Special Effects, Costuming, Props, Sets, and Lights and Sound. They will experience each of these elements as a designer and as a crewmember. They will practice these acquired skills in the classroom and backstage during a live production.</p> <p>Theatre Tech will acquaint the student with the world of technical theatre. Through lectures, class discussions, projects and lab work, students will be introduced to the basic concepts of scenery, costumes, props, lighting, sound and special effects and how they all work together to create a unified theatrical production. They will step into the shoes of a designer, and learn and practice the steps of creating an idea, pitching the idea, executing a design, and presenting it. In the end the student should have a working understanding of theatre as a collaborative, living art.</p>			

Course Title:	Dance 7/8		
Course Code:	T6000x7 / T6000x8	Grade Level(s):	7–8
HS Graduation Credit:	N/A		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	N/A	Honors:	N/A
<p>This course provides students the opportunity to acquire a comprehensive knowledge of dance as an art form. Students learn and refine dance skills and techniques in class and in performance, study the historical and cultural significance of dance and its evolution as an art form, and evaluate personal work and the work of others.</p>			

Course Title:	Dance 1		
Course Code:	T6000xx	Grade Level(s):	9 through 12
Prerequisite(s):	None		
HS Graduation Credit:	VPA / Elective		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	f	Honors:	No
<p>This course provides students the opportunity to acquire a comprehensive knowledge of dance as an art form. Students learn and refine dance skills and techniques in class and in performance, study the historical and cultural significance of dance and its evolution as an art form, and evaluate personal work and the work of others.</p>			

Course Title:	Dance 2		
Course INFO:	2 Semesters / 5 Units per Semester		
Course Code:	T6050xx	Grade Level(s):	10-12
Prerequisite(s):	None		
HS Graduation Credit:	VPA / Elective		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	f	Honors:	No
<p>This course is designed to include applications of beginning dance movements and technique to advanced movement combinations and preparation and <u>execution</u> of choreography and performance. Students learn to express themselves through a variety of movement techniques as well as express themselves on paper with demonstrations of critique writing.</p>			

Course Title:	Beginning Band		
Course Code:	T1201XX	Grade Level(s):	7 and 8
Prerequisite(s):	None		
HS Graduation Credit:	N/A		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	N/A	Honors:	N/A
Beginning band is composed primarily of students, grades 7 th through 8 th . This class will work on basic music fundamentals. It is a class geared toward expanding the student's musical ability and knowledge.			

Course Title:	Intermediate Band		
Course Code:	T1230x7 / T1230x8 / T1230xx	Grade Level(s):	7 through 9
Prerequisite(s):	None		
HS Graduation Credit:	VPA / Elective		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	f	Honors:	No
Intermediate Band presents second and third year instrumental players the opportunity to continue to build on a first year of instrumental music development that is crucial for continued musical achievement.			

Course Title:	Advanced Band		
Course Code:	T1250xx	Grade Level(s):	10 through 12
Prerequisite(s):	Band 1 or teacher recommendation		
HS Graduation Credit:	VPA / Elective		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	f/g - pending	Honors:	No
<p>The advanced band is a main focus of the music program at University Preparatory Academy. This class is composed of 9th–12th grade students. This ensemble will work on high quality concert band literature, and will perform at festivals and concerts. It is highly recommended that students in advanced band consider studying privately. The director can make recommendations for private study.</p>			

Course Title:	Music Production		
Course Code:	A4050xx	Grade Level(s):	10 through 12
Prerequisite(s):	N / A		
HS Graduation Credit:	VPA / Elective		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	f/g - pending	Honors:	No
<p>This course is designed to introduce students to the techniques, background, art, and science of digital audio recording. Through the use of individual project-based assignments and group hands-on instruction, students will gain experience in computer-based studio recording, live recording, sound reinforcement, and audio production elements such as mixing, editing, and mastering. Additionally, students will be continually exposed to a variety of musical styles, genres, and cultures as well as listening techniques such as balance, blend, and intonation in order to gain an appreciation for varied musical art forms and to develop a discerning ear. Other topics include foundational music theory, the physics of acoustics, and exposure to and mastery of musical, aesthetic, and technical terminology.</p>			

General Elective “g”

UPA currently offers limited specific UC general college preparatory elective category “g” offering. However, many of the courses in the “a–f” categories can be utilized to meet the “g” category requirement. Table 4 lists the “a–f” courses offered at UPA that can be utilized for “g” credits. However, many such courses are available for “g” credit only after a minimum number of credits for the course’s primary category have been fulfilled. The courses, categories, and minimum category credits are detailed in this table.

Course Title:	Introduction to Engineering Design		
Course Code:	Y1000XX	Grade Level(s):	9 through 12
Prerequisite(s):	None		
HS Graduation Credit:	Elective		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	g	Honors:	No
This survey course exposes students to major concepts they’ll encounter in a post-secondary engineering course of study. Topics include mechanisms, energy, statics, materials, and kinematics. They develop problem-solving skills and apply their knowledge of research and design to create solutions to various challenges, document their work and communicate solutions.			

Course Title:	Principles of Engineering		
Course Code:	Y1200XX	Grade Level(s):	9 through 12
Prerequisite(s):	Successful completion of Introduction to Engineering Design		
HS Graduation Credit:	Elective		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	g	Honors:	No
<p>POE is a high school-level survey course of engineering. The course exposes students to some of the major concepts that they will encounter in a postsecondary engineering course of study. Students have an opportunity to investigate engineering and high tech careers. POE gives students the opportunity to develop skills and understanding of course concepts through activity-, project-, and problem-based (APPB) learning. Used in combination with a teaming approach, APPB learning challenges students to continually hone their interpersonal skills, creative abilities, and problem solving skills based upon engineering concepts. It also allows students to develop strategies to enable and direct their own learning, which is the ultimate goal of education.</p>			

Course Title:	Digital Electronics		
Course Code:	Y1600XX	Grade Levels:	9-12
Prerequisite(s):	Successful completion of Principles of Engineering		
HS Graduation Credit:	Elective		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	g	Honors:	No
<p>From smart phones to appliances, digital circuits are all around us. This course provides a foundation for students who are interested in electrical engineering, electronics, or circuit design. Students study topics such as combinational and sequential logic and are exposed to circuit design tools used in industry, including logic gates, integrated circuits, and programmable logic devices.</p>			

Table 4 UPA Courses that Can Be Used to Meet the UC / CSU “g” General Elective Requirement

UPA Approved Course	Normal Category	When Available for “g” Use
World Geography	“a”	> 2 “a” courses
World History	“a”	> 2 “a” courses
AP World History	“a”	> 2 “a” courses
AP United States History	“a”	> 2 “a” courses and US History
AP United States Government and Politics (semester)	“a” / “g”	always “g”
Economics (semester)	“a” / “g”	always “g”
AP Literature and Composition	“b”	> 4 “b” courses
AP Language and Composition	“b”	> 4 “b” courses
Statistics	“c”	> 3 “c” courses
Pre-Calculus Honors	“c”	> 3 “c” courses
AP Calculus (AB)	“c”	> 3 “c” courses
AP Calculus (BC)	“c”	> 3 “c” courses
Introduction to Computer Science	“c”	a-g approval pending
Chemistry	“d”	> 2 “d” courses and Biology and Physics
Chemistry Honors	“d”	> 2 “d” courses and Biology and Physics
Physics	“d”	> 2 “d” courses and Biology and Chemistry
Biology	“d”	> 2 “d” courses and Biology and Chemistry
AP Biology	“d”	> 2 “d” courses
AP Chemistry	“d”	> 2 “d” courses
AP Environmental Science	“d”	> 2 “d” courses
AP Psychology	“a”	> 2 “a” courses
Spanish 3	“e”	> 2 “e” courses
Spanish Immersion	“e”	> 2 “e” courses
AP Spanish Literature and Culture	“e”	> 2 “e” courses
Drawing and Painting I&II	“f”	> 1 “f” course
3-Dimensional Design	“f”	> 1 “f” course
Advanced Band	“f”	> 1 “f” course
Advanced Dance	“f”	> 1 “f” course

Theatre Technology	“f”	> 1 “f” course
Journalism	“b” / “g”	> 4 “b” courses
Principles of Engineering	“g”	always “g”
Introduction to Engineering Design	“g”	always “g”
Digital Electronics	“g”	always “g”
Principles of Biomedical Engineering	“d” / “g”	> 2 “d” lab courses
Human Body Systems	“d” / “g”	> 2 “d” lab courses
Biomedical Innovations	“d” / “g”	> 2 “d” lab courses

Non Departmental Other Elective (non UC / CSU)

Table 5 Non-Departmental Elective Course Offerings

Course	Course Code	Grade Level
Advisory (7-8)	Y1100xx	7-8
Advisory (1-4)	Y1130xx	7-12
AVID 7	Y1710XX	7
AVID 8	Y1720XX	8
AVID 9	Y1730XX	9
AVID 10	Y1740XX	10
Introduction to Technology	Y9010x7/8	7-8
Gateway to Technology	Y1000x7/8	7-8

Course Title:	Advisory 7-8		
Course Code:	Y1100xx	Grade Level(s):	7-8
HS Graduation Credit:	N/A		
Course INFO:	2 Semesters / 2.5 Units per Semester		
UC / CSU:	N/A	Honors:	N/A
<p>All students participate in a leadership/advisory class that will focus on college and personal success strategies. UPA helps each student develop his/her personal vision, set goals, research what it takes to achieve those goals, and work toward realizing them. The Leadership/Advisory class, which includes models and strategies taken from the AVID curriculum, focuses on teaching the skills needed to be successful at gaining admission to leading colleges and being prepared to meet the challenges that each student will face in pursuing that education. Students who do not have parents who are skilled in navigating the educational system fall through the cracks and are not prepared to attend four-year colleges and universities because they do not have necessary information or an advocate to assist them in achieving their goals. A one-to-one personal relationship with a teacher/mentor in high school increases student success. The Leadership/Advisory class is designed to fulfill this role. Character development, college success strategies, leadership skills, and service learning will all be a part of the curriculum for this class. The advisor/teacher of this advisory class follows her/his group of students throughout their four years in high school, serving as a mentor and advocate for each of their advisory students. UPA brings a college-going culture to the public high school campus, open to any student willing to exert the effort to complete the UPA program, and prepare each student for the competitive world of the 21st Century.</p>			

Course Title:	Advisory (1–4)		
Course Code:	Y1130xx – 1 Y1140xx – 2 Y1150xx – 3 Y1160xx – 4	Grade Level(s):	9-12
HS Graduation Credit:	Advisory		
Course INFO:	2 Semesters / 2.5 Units per Semester		
UC / CSU:	N/A	Honors:	N/A
<p>All students participate in a leadership/advisory class that will focus on college and personal success strategies. UPA helps each student develop his/her personal vision, set goals, research what it takes to achieve those goals, and work toward realizing them. The Leadership/Advisory class, which includes models and strategies taken from the AVID curriculum, focuses on teaching the skills needed to be successful at gaining admission to leading colleges and being prepared to meet the challenges that each student will face in pursuing that education. Students who do not have parents who are skilled in navigating the educational system fall through the cracks and are not prepared to attend four-year colleges and universities because they do not have necessary information or an advocate to assist them in achieving their goals. A one-to-one personal relationship with a teacher/mentor in high school increases student success. The Leadership/Advisory class is designed to fulfill this role. Character development, college success strategies, leadership skills, and service learning will all be a part of the curriculum for this class. The advisor/teacher of this advisory class follows her/his group of students throughout their four years in high school, serving as a mentor and advocate for each of their advisory students. UPA brings a college-going culture to the public high school campus, open to any student willing to exert the effort to complete the UPA program, and prepare each student for the competitive world of the 21st Century.</p>			

Course Title:	AVID 7, AVID 8, AVID 9, AVID 10		
Course Code:	Y1710XX – 7 Y1720XX – 8 Y1730XX – 9 Y1740XX – 10	Grade Level(s):	7, 8, 9, 10
Prerequisite:	Application process		
HS Graduation Credit:	Elective		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	N/A	Honors:	No
<p>The AVID course is an elective class for students who are college-bound. The AVID curriculum focuses on writing, inquiry, collaboration and reading (WICR) through the AVID High School curriculum in both teacher and tutor-led activities. While concurrently enrolled in a college-prep course of study, students learn strategies to enhance success. Note-taking, outlining, writing, speaking, reading, test-taking strategies, and self-awareness are stressed. In addition, the course includes college motivational activities. AVID is designed to be a program of study that students may follow for the entirety of their schooling and each grade level is distinct and builds upon the skills learned in the previous year. Students must apply to be a part of the AVID program and maintain a 2.5 or higher to remain in the program.</p>			

Course Title:	Technology in Society (formerly Introduction to Technology)		
Course Code:	Y9010x7/8	Grade Level(s):	7–8
HS Graduation Credit:	N/A		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	N/A	Honors:	N/A
<p>Technology in Society is a course focused on developing research, analysis, and presentation skills, via social studies content and various technologies. The course is a project-based course that is intended to develop students' abilities to find, evaluate, and present information in a manner that displays college and career readiness, as appropriate for middle-school students.</p>			

Course Title:	Gateway to Technology (PLTW)		
Course Code:	Y1000X7/8	Grade Level(s):	7/8
Prerequisite(s):	None		
HS Graduation Credit:	N/A		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	N/A	Honors:	No
<p>The PLTW Gateway To Technology (GTT) program features a project-based curriculum designed to challenge and engage the natural curiosity and imagination of middle school students. They envision, design and test their ideas with the same advanced modeling software used by companies like Lockheed Martin, Intel and Sprint. They study mechanical and computer control systems; think robotics and animation. Students also explore the importance of energy, including innovative ways to reduce, conserve and produce it using solar, thermal and wind power. The knowledge that students gain and the skills they build from GTT create a strong foundation for further STEM learning in high school and beyond.</p> <p>Throughout GTT, students acquire knowledge and skills in problem solving, teamwork and innovation as well as explore STEM careers. Taught in conjunction with a rigorous academic curriculum, the program is divided into six, nine-week independent units, assuming a 45-minute class period. Schools implement both foundation units and may add any combination of the specialization units.</p>			

Physical Education (non UC / CSU)

Table 6 Physical Education Department Course Offerings (UC “f”)

Course	Course Code	Grade Level
Physical Education (7–8)	PO700x7/8	7–8
Physical Education (1–4)	P1000xx	9–12

Course Title:	Physical Education (7–8)		
Course Code:	P1000xx	Grade Level(s):	7 and 8
HS Graduation Credit:	N/A		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	N/A	Honors:	N/A
<p>Physical Education at UPA offers a wide variety of experiences related to athletics, fitness, nutrition, and anatomy. Students will learn that individual skill development and personalized statistical analysis can parallel self improvement strategies related to timing, strength, and endurance. Group project development and teamwork settings will also be used as a means to develop confidence and instill a desire for lifelong physical fitness.</p>			

Course Title:	Physical Education (1–4)		
Course Code:	P1000xx	Grade Level(s):	9 recommended, 10–12, 1 year required, 2 years recommended
HS Graduation Credit:	Physical Education		
Course INFO:	2 Semesters / 5 Units per Semester		
UC / CSU:	N/A	Honors:	N/A
<p>The major emphasis of study for this course will be to guide students through a wide variety of movement patterns associated with sport. As a parallel to this absorption of knowledge, concepts such as nutrition, health, anatomy, and physiology will be implemented as a means to further student awareness and lifelong commitment to being physically active. Students will perform a wide variety of movement patterns as a means to develop and maintain a level of fitness appropriate for their individual grade level. Through such aspects as plyometric training, static and active stretching, endurance running, and active recording, each student will be able to biomechanically improve motor function and record efficient data to support this development.</p>			

