Course Descriptions

10th Grade:

Chemistry in the Earth System

Chemistry in the Earth system is a (college preparatory) two-semester course designed to meet the needs of students pursuing a major in a University or College. It integrates the concepts of Chemistry and Earth science linking cross-cutting concepts to make them more relevant to the students.

The course will meet the A-G requirements for the University of California and the California State University systems. To meet the minimum qualifications for these colleges, a grade of C or better must be achieved. The course is strictly aligned with the Next Generation Science Standards (NGSS) that have been adopted by our state.

The course encompasses the following major areas in a storyline format: Atoms, Elements, and Molecules, Chemical Reactions, and Combustion (1P), Heat and Energy in the Earth System, the Dynamics of Chemical Reactions and Ocean Acidification, and the Chemistry of Climate Change, and (2P).

AP World History: Advanced Placement World History focuses on developing students' understanding of world history from 1200 C.E. to the present. The course also develops students' historical thinking skills of chronological reasoning, argumentation and causation as well as advanced writing skills, therefore, strong reading and writing skills are necessary for success. AP World History is designed to be the equivalent of a one-semester introductory college or university world history course. Satisfactory completion of the course will prepare students to take the College Board Advanced Placement Exam in World History.

English 10 HP (honors): This course will explore the universal themes of the human condition, the power of words, and the search for utopia through a variety of texts (literature, expository, argumentative, and visual). These will serve as a tool to develop close reading and critical thinking skills. A large emphasis will be on literary analysis but will also include an introduction to the basic elements of rhetorical analysis which will provide a foundational introduction to AP Language and Composition (11th grade). In addition, we will continue refining our use and analysis of the writing process for the purpose of improving our writing and evaluating other writers' choices. We will also continue building research skills and writing that will culminate an in depth career I-search.

10th, 11th, & 12th Grade:

Engineering Year 1: Students dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems using 3D modeling software, and use an engineering notebook to document their work. Students gain a deeper understanding of how to design as individuals and in a group. Projects range from designing toys to fashion objects to modeling cars.

Engineering Year 2: Principles of Engineering (must have passed IED course) Through problems that engage and challenge, students explore a broad range of engineering topics, including mechanisms, the strength of structures and materials, and automation. Students develop skills in problem solving, research, and design while learning strategies for design process documentation, collaboration, and presentation. Students will be involved in robotics competitions.

Engineering Year 3: Students learn important aspects of building and site design and development. They apply math, science, and standard engineering practices to design both residential and commercial projects.

Yearbook: The goal of this course is to introduce students to the elements of publishing a selling a published yearbook. Students will ultimately be producing the school's yearbook, along with focusing on topics such as copy-writing, photography, design, editing, marketing, and accounting. Being a member of the yearbook staff is an awesome responsibility, but by the end of the year, students will have produced a book that is valued by students, faculty, and community.

Band: The band class emcompasses both concert and marching band. It is a performance orientated and requires time outside of the regular class day. Traditional instrumental training , music theory are used to develop artistic perception and creative expressions in a variety of genres. This course is aligned with the California state standards and a performance based standards developed by NAfME.

Spanish for Native Speakers: This course is designed for students who have been exposed to listening, speaking, reading and writing in Spanish and are interested in polishing their skills and acquiring new ones. Students will read and write extensively, give oral presentations, participate in debates, discuss and analyze readings related to global issues and literature. They will evaluate the unique and interesting perspectives of Hispanic culture to develop awareness of different worldviews. The students will establish connections with the Spanish speaking world through the use of technology and authentic resources. They will learn about the fundamental of Spanish grammatical structures and apply what they have learned in both formal and informal settings. A placement test will be given to see if candidates meet the minimum competences required for this course.

11th Grade:

AP US History: Advanced Placement U.S. History (APUSH) is a college level course taught in the 11th grade. By taking this course and earning a score of three or better on the APUSH exam in May, a college freshman may skip the first year of U.S. history at the college level. The course covers the time frame of 1491 to the present. This is a rigorous course whereby students should expect to utilize high level skills of critical analysis, and synthesis. Strong reading and writing skills are necessary.

AP English Language and Composition: This course focuses on rhetorical analysis (rather than Literary Analysis), critical thinking, the craft of writing, and the mechanics of writing. As such, there is much emphasis on analyzing the choices professional authors make in relation to their audience and purpose, as well as developing the skills and strategies of the students' writing. This course covers most of the modes of development: Definition, Classification, Comparison and Contrast, Cause and Effect, Persuasion, and Argument.

11th & 12th Grade:

AP Biology: The advanced placement program's mission is to provide an opportunity for high school students to pursue and receive credit for college-level course work. The class will have a rigorous schedule that will allow motivated and able students to receive instruction in an advanced form of biology. The curriculum is different from the introductory biology taught in the lower division at West Campus. Due to the rigor of the course and the length of the lab activities, additional class time may be scheduled before or after regular school hours to ensure student success and completion of the activities.

The course emphasizes the major themes and concepts of biological science. The course will utilize laboratory activities to allow students to experience the hands-on, discovery aspect of science. This allows the students to do both quantitative and qualitative science ensuring that they will get the "big picture" and major insights into the science of life. It also makes the content of a biology course less overwhelming and more meaningful by weaving small pieces together into a relevant, understandable whole.

Prerequisites for this course is Biology and Chemistry 1P & 2P with a grade of C or better completed prior to taking this course.

AP Physics 1: AP Physics 1 is an algebra-based, introductory college-level physics course. Students cultivate their understanding of physics through inquiry-based investigations as they explore topics such as Newtonian mechanics (including rotational motion); work, energy, and power; mechanical waves and sound; and introductory, simple circuits. This course is a full-year course that is equivalent of a first-semester introductory college course in algebra-based physics. A main goal of the course is to learn physics well enough to pass the AP Physics 1 exam with a score of 3 or higher. There are no prerequisite courses however students should demonstrate strong performance in Math 1 and 2.

AP Physics 2: AP Physics 2 is an algebra-based, introductory college-level physics course. Students cultivate their understanding of physics through inquiry-based investigations as they explore topics such as fluid statics and dynamics; thermodynamics with kinetic theory; PV diagrams and probability; electrostatics; electric circuits with capacitors; magnetics fields; electromagnetism; physical and geometric optics; and quantum, atomic, and nuclear physics. This course is a full-year course that is equivalent to a second-semester introductory college course in physics. A main goal of the course is to learn physics well enough to pass the AP Physics 2 exam with a score of 3 or higher. Prerequisite course is AP Physics 1. Students should have taken or be concurrently taking precalculus or equivalent.

Human Anatomy and Physiology: Human Anatomy and Physiology is designed to introduce students to the study of the nature of the human body by going more in depth with the structures and function of the human body beyond those areas already taught in biology. Students in this course will focus on the major body systems, nutrition, and cancer. Often an inquiry based approach will be taken to learning various systems of the body, to support the Next Generation Science Standards. The Common Core Literacy Standards in Science are also emphasized.

Physics: General Physics (college preparatory) is a two-semester course designed to meet the needs of students pursuing a major in a University or college. This course will meet the A-G requirements for the University of California and the California State University systems. In order to meet the minimum qualifications for these colleges, a grade of C or better must be achieved. With California schools transitioning to the Next Generation Science Standards (NGSS), this course will incorporate the concepts and practices outlined in those standards. Students will be exploring concepts in depth using a Model Based Reasoning (MBR) approach in order to practice science realistically. Coursework consists of laboratory investigations, activities, class discussions, reading assignments, problem-solving, and individual/group projects. Students will be exploring the following areas: Introduction to Motion, Forces and Motion, Universal Gravitation, Momentum and Collisions, Energy Systems, Electrical Interactions, and Waves.

AP Spanish: We will emphasize communication in interpersonal, interpretive, and presentational modes using real-life situations to expand students' ability to express themselves in Spanish. We will study authentic resources from various parts of the Spanish speaking world across six themes and engage in the exploration of culture, both past and present. We will make comparisons between cultural products, practices, and perspectives. The goal of the class is to improve students' Spanish expression and comprehension and to prepare them for the AP exam. This class is taught in Spanish and students will be expected to use only Spanish in the class. The prerequisite for this course is C or better in Spanish 3.

AP French: The AP French Language and Culture course takes a holistic approach to language proficiency and Francophone cultures. This course strives to promote both fluency and accuracy in language use and does not overemphasize grammatical accuracy at the expense of communication. In order to best facilitate the study of language and culture, this course is taught in the target language. The course engages students in an exploration of culture in both contemporary and historical contexts. The course develops students' awareness and appreciation of books, music, laws, conventions, patterns of social interactions within a culture, values, attitudes, and assumptions.

Peer Tutoring: Students who take Peer Tutoring will be placed into a class at Mark Twain Elementary to assist that teacher with their class.

AP Calculus AB: Students will learn all topics listed in the AP Calculus AB Course Description including limits, differentiation, integration and their applications with the usage of graphing calculators. The two objectives of the course are that the students will be fully equipped to pass the AP Calculus AB Exam and be ready to challenge higher math/science courses at the college level.

AP Calculus BC: Students will learn all topics listed in the AP Calculus BC Course Description including limits, differentiation, integration and their applications with the usage of graphing calculators. The two objectives of the course are that the students will be fully equipped to pass the AP Calculus BC Exam and be ready to challenge higher math/science courses at the college level.

AP Statistics: This course is equivalent to a one-semester, introductory, non-calculus based college course in statistics. The topics for A.P. Statistics are divided into four major themes: descriptive statistics, planning a study, probability, and inferential statistics. The first semester will cover chapters 1-7. The second semester will cover chapters 8-13. The AP Statistics exam will be given in May (afternoon). Those who pass the exam (3 or better) may receive credit for a one-semester introductory college statistics course.

Music Appreciation: Year long course that satisfies the UC a-g requirements for fine arts. This course encompasses basic music theory, historical periods (the direction of music within those periods),and examination of the influences of 20th century musical trends in the shape of music today. Creative expression and artistic license are covered throughout the course in the form of practical application. Those applications are demonstrated in basic composition and song formation using current technology as well as traditional methods.Outside activities of Concert attendance are required as well.

AP Art: The AP Studio Art, 2-D Design portfolio is designed for students who are seriously interested in the practical experience of art. AP Studio Art is not based on a written exam. Students will submit portfolios for evaluation near the end of the school year. These portfolios are produced while following the West Campus High School curriculum established for this course.

The AP Program is a cooperative endeavor that helps high school students complete
college level courses and permits colleges to evaluate, acknowledge, and encourage that accomplishment through the granting of appropriate credit. Students will submit all of their work on-line and choose 5 best ones to physically turn into the College Board. However, to receive high school credits, students will turn in the required assignments each quarter.

Advanced Art: Art P is a one year course, consisting of Art 3 and Art 4. Art 3 is a prerequisite for Art 4. This course is a yearlong advanced level course for students who have excelled in Art 1-2 and wish to further explore visual art. This course is designed to help students build up their portfolios for use in AP Studio Art, college acceptance, and/or job placement. Students will have further experience in utilizing pencil, colored pencil, charcoal, collage, watercolor, oil pastel, chalk, ink, and sculpture. Students will also participate in critiques, presentations, and small group discussions. Work outside of class will be required. *This may include: research of a particular artist, style, or period of art; preparation of an art project or portfolio; and reading, writing, or critical review.*

12th Grade:

AP English Literature and Composition: Advanced Placement English Literature and Composition is a grade 12 course with an emphasis on literary analysis. It is a rigorous, college level course, in which students study the art of reading and writing about great literature. Throughout the course, students will be assessed on their ability to effectively and cogently communicate their ideas about what they read, both orally and in writing. Students will be given multiple opportunities to practice these skills before they take their AP Exam in May. Students who take this course are required to take both the AP Exam and the AP Practice Exam. Most highly competitive college and universities will award college credit for your successful completion of the examination (a score of 3, 4, or 5). The most competitive schools require a score of 4 of 5. To help you accomplish your goal, we will cover a significant number of works thoroughly rather than a great number of works superficially and sharpen your skills in analysis, synthesis, and evaluation.

This course is designed to comply with the curricular requirements described in the *AP English Course Description*. The AP Literature course will emphasize sophisticated analytical writing and speaking skills. The primary objective of this course, however, is that students will become lifelong lovers and critics of literature. Through reading and writing, students get a chance to explore worlds and ideas outside of their own, enabling them to develop empathy for other genders, ethnicities, generations, nationalities, religions and cultures. Literature is intimately involved in our quest to understand humanity and the societies we create. In AP English Literature and Composition, students are given multiple opportunities to discover and confront issues and questions that exercise their minds and intellects. The course will focus on two overarching questions: Why do authors write? (Author's purpose) and what is the "art" in their writing? (Author's craft). The texts for the course are selected for their broad themes and international literary merit.

AP Government: AP American Government is a course designed to acquaint students with the origins, concepts, organizations, and policies of the United States government and political system. To increase comprehension, students will read and analyze relevant primary and secondary source documents and incorporate these ideas into the assigned material. The course is for all intents and purposes taught on a college level and it requires a substantial amount of reading and preparation for every class. Satisfactory completion of the course will prepare students to take the College Board Advanced Placement Exam in U.S Government and Politics.

Honors Chemistry:(college preparatory) is a two-semester course designed to meet the needs of students pursuing a science major in a University or College.
The course will meet the A-G requirements for the University of California and the California State University systems. To meet the **minimum** qualifications for these colleges, a grade of C or better must be achieved. The course is designed to help students who intend to be a science major attending a four year college and contains changes to reflect the incoming Next Generation Science Standards (NGSS).
The course encompasses the following big ideas: **1**. Elements are the fundamental building blocks of matter. **2**. Properties of materials can be explained by the arrangement of the atoms. **3**. Changes in matter involve the rearrangement of atoms or transfer of

electrons. **4**. Rates of chemical reactions are determined by molecular collisions. **5**. The laws of thermodynamics describe the role of energy, which explains the direction of change in matter. **6**. Any bond that can be formed can be broken. These major areas will overlap to reemphasize and build a solid foundation.
The laboratory portion of the course will correlate with the instructional units rounding out the course.
Prerequisite for this course is Chemistry 1P & 2P with a grade of C or better completed prior to taking this course.

College Ready Math: Senior only course that focuses on strategies for problem solving. Students will be reflecting on past courses and learning about different approaches for topics they have seen before. This course covers material students have covered in Algebra 1, Geometry and Algebra 2 (Math1, Math 2 and Math 3). This course is an A-G approved Elective course.

Social Psychology: This is an introductory course that examines the historical methods, principles and theories of psychology as applied to the study of human thought, emotion and behavior.
Topics discussed but not limited to include: research methods, physiological foundations of behavior, growth and development, learning and memory, visual perception, motivation and emotion, personality, stress management, social interactions, social behavior, intelligence, social psychology, cognitive psychology, and psychological disorders and treatment. Various films, research articles and other supplementary materials will be used.

Ethnic Studies: Ethnic Studies is an interdisciplinary course that uses a comparative and historical perspective to examine the languages, values, and voices of diverse groups within the United States. Using the skills and knowledge under the Common Core Standards for History/Social Studies students will investigate the practice of naming and being named, the intersection between ethnicity, culture, nationality, race, and gender, and the historic, economic and personal consequences of oppression and resistance. Students will also learn how the social construction of identity is created, contested, and altered by historic and economic processes. Emphasis will be on African-Americans,
Asian/Pacific Islanders, Chicanos/Latinos, Native Americans and other ethnic groups in Sacramento and Northern California.

Seniors are required to take either a math course or a science course - it is recommended to take both. Seniors are expected to take either an Advanced Placement (AP) course or enroll in a city college class.