High School Course Guide 2017-2018 Addendum

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Career Technical Education

Advanced Culinary ROP

Grades 10-12 **10 Credits** **Year**

Prerequisite: Completion of Culinary Arts with a grade of C or better

This program prepares students with advanced skills that will enable them to seek employment in institutional, commercial or independently owned food establishments or other types of hospitality occupations. Instruction includes topics such as safety and sanitation; side work and customer orders; use of commercial equipment, buffet, garde manger, entree and sauce use, and bakery production. Students will develop these skills in a campus-based restaurant or catering environment.

Meets the Vocational Arts Graduation Requirement

Ag Sustainability

Grades 11-12 **5/10 Credits** **Semester/Year**

Prerequisite: Water Technology recommended and Water & Sustainable Agriculture

Agriculture Environmental Sustainability (AES) is a high school-level specialization course where students investigate and design solutions to solve real-world challenges related to clean drinking water, a stable food supply, and renewable energy. Students are introduced to environmental issues and use the engineering design process to research and design potential solutions. Through both individual and collaborative team activities and projects, students problem solve as they practice common design and scientific protocols such as project management, lab techniques, and peer review. Students develop skills in designing experiments, conducting research, executing technical skills, documenting design solutions according to accepted technical standards, and creating presentations to communicate solutions.

Meets the Life Science Graduation Requirement

AP Computer Science A

Grades 10-12 **10 Credits** **Year**

Prerequisite: None

AP Computer Science A teaches students Java and authentic Android app development. Students in this course develop their communication and collaboration skills while learning to use a variety of tools. The primary goal of the course is to create independent-thinking app developers: every unit in this course builds on students' prior knowledge and skills until they are able to complete an app development cycle independently from the ground up. This course will align with all learning objectives in the College Board's AP Computer Science A framework, and includes the College Board's requirement of 20 hours of lab activity.

Meets the Vocational Arts Graduation Requirement

Art of Fashion ROP

Grades 10-12 **10 Credits** **Year**

Prerequisite: None

In this course the student will understand the importance of the creative aspects of the fashion industry and how creative expression along with historical and cultural context work together in the industry. Students will not only create projects but will be able to tie them back to cultural and historical influences. They will be able to use and identify the principles and elements of design in both pieces of art and fashion. The units of study that tie the fashion industry to the visual and performing arts are fashion design, trend forecasting, history of fashion, textiles and yarns, marketing, advertising, promotion, and visual merchandising. The students will examine and differentiate the historical and economic significance of fashion on our society and discuss the role of art in the fashion industry. They will identify and use the principles and elements of design to discuss, analyze and write about the works of fashion designers and various aspects of the fashion industry. They will investigate and analyze past and current trends in fashion design and discuss how the issues of time, place, and cultural influence are reflected in selected works of fashion.

Meets the Vocational Arts Graduation Requirement

BITA (Building Industry Technology Academy) II

Grades 10-12 **10 Credits** **Year**

Prerequisite: BITA I (required), Math I (recommended)

BITA II focuses on the ins and outs of plumbing. BITA is a comprehensive four-year high school program developed by Building Industry Association (BIA) member companies and education leaders. BITA offers a curriculum aimed at producing skilled professionals who will be qualified to enter the home-building workforce or attend college or trade schools in the construction trades. Students enrolled will experience hands on building in various trades such as rough and finish carpentry, concrete, masonry, drywall, electrical, plumbing, roofing, siding, etc. Students will also learn career skills (soft skills) they can take to any area in the workforce. They will also have the opportunity to compete in a variety of competitions through our Build team and our Career and Technical Student Organization (CTSO) SkillsUSA.

Meets the Vocational Arts Graduation Requirement
Submitted for UC/CSU a-g Requirement

BITA (Building Industry Technology Academy) III

Grades 11-12 **10 Credits** **Year**

Prerequisite: Successful completion of BITA II

BITA III focuses on the electrical part of the building industry including coding. BITA is a comprehensive four-year high school program developed by Building Industry Association (BIA) member companies and education leaders. BITA offers a curriculum aimed at producing skilled professionals who will be qualified to enter the home-building workforce or attend college or trade schools in the construction trades. Students enrolled will experience hands on building in various trades such as rough and finish carpentry, concrete, masonry, drywall, electrical, plumbing, roofing, siding, etc. Students will also learn career skills (soft skills) they can take to any area in the workforce. They will also have the opportunity to compete in a variety of competitions through our Build team and our Career and Technical Student Organization (CTSO) SkillsUSA.

Meets the Vocational Arts Graduation Requirement
Submitted for UC/CSU a-g Requirement

BITA (Building Industry Technology Academy) IV

Grades 11-12 **10 Credits** **Year**

Prerequisite: Successful completion of BITA III

BITA IV looks at the electrical compatibility for solar panels. BITA is a comprehensive four-year high school program developed by Building Industry Association (BIA) member companies and education leaders. BITA offers a curriculum aimed at producing skilled professionals who will be qualified to enter the home-building workforce or attend college or trade schools in the construction trades. Students enrolled will experience hands on building in various trades such as rough and finish carpentry, concrete, masonry, drywall, electrical, plumbing, roofing, siding, etc. Students will also learn career skills (soft skills) they can take to any area in the workforce. They will also have the opportunity to compete in a variety of competitions through our Build team and our Career and Technical Student Organization (CTSO) SkillsUSA.

Meets the Vocational Arts Graduation Requirement
Submitted for UC/CSU a-g Requirement

Computer Graphics and Design

Grades 9-12 **5/10 Credits** **Semester/Year**

Prerequisite: None

This one-year introductory level course will focus on a correlated curriculum that has a balanced emphasis on the Visual Art, Media, and Entertainment standards. They will learn the basic language and elements of art techniques to create interactive products, design and draw mechanical objects and floor plans, design and build models in both 2-D and 3-D. The purpose is to enable students to understand and appreciate artistic expression and study the impact of multimedia on our society from social and economic viewpoints. Students will reflect, discuss, evaluate, and write with discrimination about the media and careers studied. Art history, graphic design, computer aided drawing and design, and higher level graphical concepts will be studied and applied. This course focuses on graphic design and computer aided design foundations including composition, layout, digital art, illustration, typography, photo manipulation, reading blueprints, and drafting.

Meets the Vocational Arts Graduation Requirement
Submitted for UC/CSU a-g Requirement

Computer Science Essentials

Grades 9-12 **10 Credits** **Year**

Prerequisite: Concurrent enrollment in Integrated Math I or higher or completion of Integrated Math I with grade of "C" or higher.

Computer Science Essentials recognizes the diversity of students' prior knowledge in computer science, welcoming students with limited knowledge but also challenging those with previous CS experience. This course will empower students to develop computational thinking skills that prepare them to advance to Computer Science Principles (CSP) and Computer Science A (CSA). Throughout the course, students will have opportunities to apply computational thinking practices and collaborate just as computing professionals do to create products that address topics and problems important to them. Computer Science Essentials is an optimal starting point for those interested in gaming, building apps and careers in programming/computer science. During the course, students work in teams to create apps for mobile devices using MIT App Inventor while applying concepts of event-driven programming, branching and iteration, variables, and abstraction; the building blocks of creating with code. Through engaging tasks, students explore the impact of computing in society and build skills in digital citizenship and cybersecurity. Beyond learning the fundamentals of programming, students build computational thinking skills by applying computer science to collaboration tools, modeling, simulation, and data analysis. Students use their understanding of programming in App Inventor to learn text-based programming in Python, which they will us to create games of chance and strategy.

Meets the Vocational Arts Graduation Requirement
Submitted for UC/CSU a-g Requirement

Distribution & Logistics ROP

Grades 10-12 **10 Credits** **Year**

Prerequisite: None

This course has students explore the distribution or warehousing industry within retail, wholesale, manufacturing and public establishments. Students taking this course will learn shipping, proper lifting and loading, stocking, transportation systems, essential business forms, filing, packing, marking supplies, receiving operations, inventory control, warehouse technology, leadership skills and customer service.

Meets the Vocational Arts Graduation Requirement

Distribution Management ROP

Grades 10-12 **10 Credits** **Year**

Prerequisite: Successful completion of Distribution and Logistics course

This course covers the functions, techniques and tools utilized in warehousing and distribution centers and their role in business and logistics. Emphasis is placed on warehouse and distribution center management, operations, productivity, software systems, picking, automation, cross docking, safety, security, material handling, benchmarking and cost management.

Meets the Vocational Arts Graduation Requirement

Health Science ROP

Grades 9-12 **5 Credits** **Semester**

Prerequisite: None

This course provides students with knowledge and skills related to the basic content areas as defined in the Health Framework, and will satisfy the graduation requirement for Health. This course builds the skills students need to recognize and resist negative influences. It includes decision-making, goal setting, communication, and interpersonal skills. Content areas include: personal, family, community, and environmental health, medicines, drugs, alcohol, and tobacco, diseases, HIV, AIDS, and STD's, safety, conflict resolution, and first aid. Additionally, this course also provides the information needed for defining career choices that culminate in a career plan in health care; and includes a basic set of skills and knowledge necessary for all healthcare employees.

Homeland Security ROP

Grades 10-12 **10 Credits** **Year**

Prerequisite: None

This course focuses on Homeland Security and examines the coordination of effort and the shared mission of local, state and federal public safety agencies and intelligence/security agencies to protect the public in a post 9/11 world. Topics include preventing terrorism, reducing vulnerability of critical infrastructure, identifying key resources, maintaining order, cyber security, emergency response, emergency management, and disaster preparedness. The students will develop an understanding of the historical and contemporary guidelines of Federal, State, Local and County governments, along with the private sector and Non-Governmental Organizations.

Meets the Vocational Arts Graduation Requirement

Introduction to Design

Grades 9-12 **5/10 Credits** **Semester/Year**

Prerequisite: None

Introduction to Design is the first course in the nationally acclaimed preparation for engineering program, Project Lead the Way. During this course, students are introduced to the engineering design process, applying math, science, art, and engineering standards to identify and design solutions to a variety of real problems. Students work individually and collaboratively in teams to develop and document design solutions using engineering notebooks and 3D modeling software. The essential elements of art and design are integrated into lessons and student Projects which allows them to receive Fine Art credit toward graduation in the state of California, UC system.

Meets the Fine Arts Graduation Requirement
Submitted for UC/CSU a-g Requirement

Sports Medicine Lab

Grades 10-12 **10 Credits** **Semester (2 block course)**

Prerequisite: Completion of or concurrent enrollment in Anatomy & Physiology, Sports Medicine Advanced, or Emergency Medical Responder.

Sports Medicine Lab is designed to help students develop their skills as a healthcare provider in the areas of athletic training, physical therapy, fitness instruction, medical and sports equipment salespersons, and other sports medicine occupations. Students will have the opportunity to practice and develop the skills they have learned in the classroom. Subject matter will also include such items as personal attitude, appropriate work habits, and professional appearance. The training program may be directed to meet the student's individual needs and interests.

Meets the Vocational Arts Graduation Requirement

Sports Medicine Advanced

Grades 11-12 **10 Credits** **Year**

Prerequisite: None

This rigorous competency-based course will provide students with foundational concepts in anatomy and physiology and integrate hands-on training in the specialized fields of sports medicine, physical therapy and fitness instruction. Anatomy and physiology are utilized as the basic building blocks in understanding how the circle of care occurs within sports medicine. The human body has many intricate parts with coordinated functions that are maintained by a complex system of checks and balances. Understanding the structure and function of the human body allows individuals in sports medicine to utilize concepts that are mastered within the course to solve routine and non-routine problems. Students will be required to think critically, draw conclusions, investigate, and formulate a plan of action to determine a proper course of care and return the athlete safely to his or her activity.

Meets the Vocational Arts Graduation Requirement
Submitted for UC/CSU a-g Requirement

Water & Sustainable Agriculture

Grades 9-12 **5/10 Credits** **Semester/Year**

Prerequisite: Math I recommended

This course is designed to allow students to explore key Earth Science and Life Science concepts as they pertain to water and agriculture industries, and is the first course of a three-course integrated science sequence designed to align with the Next Generation Science Standards. For deeper understanding of scientific concepts and how those concepts apply in the careers within the water industry, students will have the opportunity to assume the role of several individuals employed in water-related careers, each with a role in trying to solve the water problems faced by the fictional city of Wateropolis. All assignments will prepare students to complete the capstone project: a portfolio of all materials and a plan to improve the sustainability of Wateropolis.

Meets the Physical Science Graduation Requirement

Water Tech & Ag Applications

Grades 10-12 **5/10 Credits** **Semester/Year**

Prerequisite: Water & Agriculture Sustainability

Water Technology & Ag Applications is a second-year college preparatory laboratory science course that integrates Next Generation Science Standards with the CTE Environmental Resources Pathway. Building on foundation knowledge gained in Water & Ag Sustainability, the pre-requisite to this course, Water Technology & Ag Applications provides students with an understanding of the cyclical relationship humans have with our water supply. The course establishes a career pathway for students interested in earning a certificate or degree in Water Supply Technology, providing an opportunity for them to explore a variety of potential jobs available in the water industry. Students conduct experiments on water quality, research and raise public awareness of the effects of contaminants, observe the economic impact of moving water to the community, learn how to treat water, and evaluate the impact human activity has on this natural resource.

Meets the Physical Science Graduation Requirement
Submitted for UC/CSU a-g Requirement

Fine Arts

Film Studies

Grades 11-12 **5 Credits** **Semester**

Prerequisite: Successful completion of English 10

Film Appreciation will introduce students to the cinema, its history and development, through the study of classic and contemporary films. This course provides a general examination of the motion picture as a communicative art. Emphasis will be placed on exposing the class to a wide variety of styles and genres, as well as formulating and justifying criticisms of the works. Screenings for this course include a broad range of films and film excerpts representing different time periods, cultures, and cinematic traditions. We will critically explore thought-provoking films and the creative approaches behind them, actively engaging with each work and developing an informed perspective through facilitated discussion, readings, class projects and activities.

Meets the Fine Arts Graduation Requirement

Language Arts

English 3D Support

Grades 9-12 **5/10 Credits** **Semester/Year**

Prerequisite: None

Students in this class enhance their academic reading and language skills through classroom principles and practices that are supported by research. As a result of collaborative efforts by students, struggling readers and language learners are provided with explicit and informed literacy and language instruction to help them meet their personal, academic, and professional goals. Students learn key language skills for the college and career workplaces.

Mathematics

Mathematics II

Grades 9-12 **5/10 Credits** **Semester/Year**

Prerequisite: End of year grade C or higher in Mathematics I

Mathematics II will continue and build upon the standards learned in Math 8 and Mathematics I. The course will cover standards from the six conceptual categories (Number and Quantity, Algebra, Functions, Geometry, Statistics and Probability, and Modeling) of the California State Standards. The Units of Study are designed to address the five Critical Areas of Focus: (1) extend the laws of exponents to rational exponents; (2) compare key characteristics of quadratic functions with those of linear and exponential functions; (3) create and solve equations and inequalities involving linear, exponential, and quadratic expressions; (4) extend work with probability; and (5) establish criteria for similarity of triangles based on dilations and proportional reasoning.

Meets the Mathematics Graduation Requirement
Meets the "c" UC/CSU a-g Requirement

Mathematics II, Honors

Grades 9-12 **5/10 Credits** **Semester/Year**

Prerequisite: End of year grade B or higher in Mathematics I

Honors Mathematics II will continue and build upon the standards learned in Math 8 and Mathematics I. The course will cover standards from the six conceptual categories (Number and Quantity, Algebra, Functions, Geometry, Statistics and Probability, and Modeling) of the California State Standards, including all "plus" standards. The Units of Study are designed to address the five Critical Areas of Focus: (1) extend the laws of exponents to rational exponents; (2) compare key characteristics of quadratic functions with those of linear and exponential functions; (3) create and solve equations and inequalities involving linear, exponential, and quadratic expressions; (4) extend work with probability; and (5) establish criteria for similarity of triangles based on dilations and proportional reasoning.

Meets the Mathematics Graduation Requirement
Meets the "c" UC/CSU a-g Requirement

Math Reasoning with Connections

Grades 12 **10 Credits** **Year**

Prerequisite: C or better in Math III or C or better in Algebra 2 AND Geometry

The MRWC is designed as a 4th year mathematics course following Math I - III (or Alg I - II and Geometry) that will provide a bridge into multiple college and career options, including STEAM, CTE, and non-technical pathways. Students successfully completing MRWC will have acquired content skills and attitudes towards learning that will be expected in entry-level college mathematics.

MRWC addresses the full scope of advanced mathematical topics in a way that is substantively different from the traditional curriculum. The distinctiveness of MRWC lies in its unique design and topic sequencing, and in the emphasis on instructional delivery that promotes exploratory and collaborative student engagement.

Based on the Common Core State Standards viewpoint that mathematics is a cohesive and connected body of work, the MRWC is structured to highlight overarching themes in mathematics that are intrinsic to and underlie many topics in the high school curriculum. The themes provide a mechanism for expanding existing content into new, advanced areas in a way that makes explicit the connectedness between old and new topics that might otherwise appear to students to be unrelated. They provide consistent threads that help students grasp why the 'rules' are the way they are as well as the constraints under which those 'rules' operate.

MRWC is designed for any student who earns a minimum grade of C in Integrated Math 3 or Algebra 2. This includes EAP Conditional (Level 3) students who do not necessarily intend to pursue calculus. These students need a 4th year course to fulfill college readiness status and are seeking an option other than statistics. It also includes EAP Not Ready (Level 2) students who are looking to improve their chances of successfully passing college and university placement exams. MRWC will also provide a good option for EAP Ready (Level 1) students who plan to continue studies in mathematics into calculus, but are looking to consolidate and strengthen foundational skills in a 'bridge' course before entering precalculus and/or calculus.

Meets the Mathematics Graduation Requirement
Meets the "c" UC/CSU a-g Requirement

Non-Departmental

AP Capstone Seminar

Grades 10-12 **10 Credits** **Year**

Prerequisite: None

AP Seminar is a foundational course that engages students in cross-curricular conversations that explore the complexities of academic and real-world topics and issues by analyzing divergent perspectives. Using an inquiry framework, students practice reading and analyzing articles, research studies, and foundational literary and philosophical texts; listening to and viewing speeches, broadcasts, and personal accounts; and experiencing artistic works and performances. Students learn to synthesize information from multiple sources, develop their own perspectives in research-based written essays, and design and deliver oral and visual presentations, both individually and as part of a team. Ultimately, the course aims to equip students with the power to analyze and evaluate information with accuracy and precision in order to craft and communicate evidence-based arguments. AP Seminar is a required course in the AP Capstone program.

Meets the Elective Graduation Requirement
Submitted for UC/CSU a-g Requirement

Physical Education

Advanced Strength & Conditioning

Grades 9-12 **5 Credits** **Semester**

Prerequisite: None

Advanced Strength and Conditioning is an Advanced Athletic course providing Strength Training and Conditioning to the Varsity sport athletes. Athletes will learn advanced lifting, programming, spotting, nutritional, and active lifelong fitness strategies. A rotating schedule will allow Head Coaches to focus on sport specific techniques with smaller group settings. Increases in Strength and Conditioning improve both athletic performance and individual health, while simultaneously increasing injury prevention.

Meets the Physical Education Graduation Requirement

PE-Dance Technique

Grades 9-12 **10 Credits** **Year**

Prerequisite: None

This year long course is designed to introduce students to beginning level concepts in jazz, ballet and modern dance technique. Students will explore these dance forms and improvisational movements while observing, analyzing and critiquing their own works and those of others to monitor growth in dance skills and performances. The student will develop a lifetime appreciation for the art of dance as well as become more physically fit, increase muscle memory, gain strength, improve stamina and increase flexibility. Training will include assisting students in developing the technical skills of dance and relationship between their persona and body. Students will gain hands-on experience by concurrent dance instruction and/or formal and informal performances in front of an audience.

Meets the Physical Education Graduation Requirement

Science

Forensic Biology

Grades 9-12 **5 Credits** **Semester**

Prerequisite: None

In this course students study biology and earth science by engaging in investigations of how scientific evidence is used to solve crimes. Students take on the roles of public safety professionals to identify, collect, preserve, test, and analyze physical evidence. Each unit of this course asks how physical evidence can be used to solve a type of crime, and students explain and explore the scientific principles at work. Students learn not only how and why evidence can be used to solve crime, but also how biogeological processes affect the preservation and viability of physical evidence. Professional report writing is emphasized in this course, reflecting the high frequency and importance of writing reports in public safety careers. Throughout this course, students will collect and analyze evidence from simulated crime scenes. The course culminates with students using physical evidence to solve a simulated homicide and delivering expert testimony in a simulated murder trial.

Meets the Life Science Graduation Requirement