



High School Course Guide
2016 -2017
Addendum

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Career Technical Education

Allied Health

Grades 10, 11, 12

5 credits/ 10 credits

Semester/ Year

Prerequisite: None

This course is designed to prepare students for entry-level employment in the hospital and/or community setting. Emphasis is placed on those skills required of a health care worker in various department of an acute care hospital setting or specific health care facility.

Meets the Vocational Arts Requirement

Anatomy, Physiology for Health Professions

Grades 11, 12

5 credits/ 10 credits

Semester/ Year

Prerequisite: C or better in Biology and Chemistry

This is a capstone level course for students planning on a career in the health sciences or medical technology. It provides that study of the structure and function of the human body and the mechanisms for maintaining homeostasis within it. Students will do readings, research and investigations that will prepare them for freshman level college courses in this area.

*Meets the Vocational Arts Requirement
Submitted for UC/CSU a-g "g" Requirement
Submitted for NCAA Requirement*

AP Computer Science Principles

Grades 10, 11, 12

5 credits/ 10 credits

Semester/ Year

Prerequisite: C or better in Algebra 1/ Math 1

AP Computer Science Principles introduces students to the central ideas of computing presenting the ideas and practices of computational thinking and inviting students to understand how computing changes the world. The course develops computational thinking skills, finding solutions to open ended problems, and engages students in the create aspects of the field.

The course has a unique focus on allowing students to be creative. Students are encouraged to apply creative processes when developing solutions and to think creatively while using simulations to explore questions that interest them. The course focuses on using technology and programming to design and implement innovative solutions using a process similar to what artists, writers, and engineers use to bring ideas to life.

*Meets the Vocational Arts Requirement
Approved by College Board Audit
Submitted the UC/CSU a-g "g" Requirement
Submitted for NCAA Requirement*

Building Industry Technology Academy (BITA) 1

Grades 9, 10, 11, 12

10 credits

Year

Prerequisite: Concurrent enrollment in Integrated Math 1 recommended

Building Industry Technology Academy 1 (BITA 1) is the foundation course for a four-year high school construction program called Eco-Design. Green construction, also known as sustainable building, will be a central and ongoing theme throughout the four-year program curriculum. Participating students will learn how to design and build structures that are environmentally responsible and resource efficient. BITA 1 introduces students to the art of residential construction while laying the foundation for future careers in construction and architecture. Year one offers students the opportunity to gain basic construction skills in the use of hand tools, operation of machine tools, types of regular and green construction materials, construction and organizational operations, sub-flooring, framing, roofing, blueprint reading, surveying and construction-specific mathematics. During the introductory year students will work in teams to build a tiny house and participate in a building competition. Students will begin and develop career portfolios, participate in field trip experiences and be exposed to networking opportunities. Core academic standards and skills are integrated into the construction curriculum, providing students with the connection between course technical skills and academic classes. Colleges and universities recommend that students who are interested in careers in architecture engineering take the BITA pathway to prepare them for post-secondary related studies.

*Meets the Vocational Arts Requirement
Approved for UC/CSU a-g "g" Requirement*

Computer Integrated Manufacturing

Grades 10, 11, 12

5 credits/ 10 credits

Semester/ Year

Prerequisite: Introduction to Engineering Design (IED) course. It is recommended that students are concurrently enrolled in grade lever mathematics and science courses.

Computer Integrated Manufacturing (CIM) is the study of manufacturing planning, integration, and implementation of automation. This course explores manufacturing history, individual processes, systems, and careers. In addition to technical concepts, the course incorporates finance, ethics, and engineering design. This reflects an integrated approach that leading manufacturers have adopted to improve safety, quality, and efficiency. Utilizing the activity-project-problem-based (APPB) teaching and learning pedagogy, students will analyze, design, and build manufacturing systems. While implementing these designs, students will continually hone their interpersonal skills, creative abilities, and understanding of the design process. Students apply knowledge gained throughout the course in a final open-ended problem to build a factory system. The course applies and concurrently develops secondary-level knowledge and skills in mathematics, science, and technology.

*Meets the Vocational Arts Requirement
Submitted for UC/CSU a-g "g" Requirement
Submitted for NCAA Requirement*

Culinary Intro

Grades 9, 10, 11, 12

5 credits/ 10 credits

Semester/ Year

Prerequisite: None

This introduction course is part of a comprehensive Culinary Arts Pathway bases on the Hospitality, Tourism, and Recreation Industry Sector of the California Career Technical Education Model Curriculum Standards. The course exposes students to the skills of safety, sanitation, measurement and recipe conversions. Instruction includes; food safety, sanitation and meal management. This course provides introduction objectives in food preparation, storage and service.

Meets the Vocational Arts Requirement

Advanced Culinary

Grades 9, 10, 11, 12

5 credits/10 credits

Semester/Year

Prerequisite: Completion of Culinary Arts (Intro) or SERVSAFE Card

product ordering, staff scheduling, inventory, daily kitchen and staff management, food costs determinations, menu planning marketing, sales human resource management, business policy and law.

Meets the Vocational Arts Requirement
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Digital Technology Support

Grades 10, 11, 12 **5 credits/ 10 credits** **Semester/ Year**

Prerequisite: Working knowledge of Chromebook, Google Drive and other school-wide software programs

Students in this class enhance their technology skills by serving as primary technicians to troubleshoot hardware, software and network issues for the school community. Students learn key customer service, training and problem-solving skills for a technological workplace.

Meets the Vocational Arts Requirement

Engineering

Grades 12 **5 credits/ 10 credits** **Semester/ Year**

Prerequisite: Introduction to Engineering design, Principles of Engineering, and Computer Integrated Manufacturing. Recommended that student is concurrently enrolled in grade level mathematics and science courses.

Engineering Design and Development (EDD) is the capstone course in the PLTW high school engineering program. It is an open-ended engineering research course in which students work in teams to design and develop an original solution to a well-defined and justified open-ended problem by applying an engineering design process. Student will perform research to select, define, and justify a problem. After carefully defining the design requirements and creating multiple solution approaches, teams of students select an approach, create, and test their solution prototype, Student teams will present and defend their original solution to an outside panel. While progressing through the engineering design process, students work closely with experts and will continually hone their organizational, communication and interpersonal skills, their creative and problem solving abilities, and their understanding of the design process. Engineering Design and Development is a high school level course that is appropriate for 12th grade students. Since the projects on which students work can vary with student interest and the curriculum focuses on problem solving, EDD is appropriate for students who are

interested in any technical career path. EDD should be taken as a final capstone PLTW course since it requires application of the knowledge and skills introduced during the PLTW foundation courses.

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Introduction to Computer Science

Grades 9, 10, 11, 12

10 credits

Year

Prerequisite: Concurrent enrollment in Integrated Math 1

Designed to be the first computer science course for students who have never programmed before. Introduction to Computer Science (ICS) 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 crating 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 use to create games of chance and strategy.

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Medical Terminology

Grades 9, 10, 11, 12

5 credits/ 10 credits

Semester/ Year

Prerequisite: None

Student will be prepared for entry-level clerical support employment in the medical field. This course provides the framework needed to recognize, define, spell, and pronounce medical terms. Medical terms related to all major body systems will be covered. Student will also learn common medical abbreviations and appropriate charting techniques.

Meets the Vocational Arts Requirement

US Criminal Justice System

Grades 11, 12

5 credits/ 10 credits

Semester/ Year

Prerequisite: C or better in last year of English

Exploring the US Criminal Justice System is a course designed to give students practical knowledge and familiarity with the workings of the Criminal Justice System. The course of study includes extensive discussion of the causes of crime as well as government response including how laws are made and enforced. Students will also analyze the roles and challenges in the criminal justice system in a democratic society.

Students will learn about police procedures, courtroom practices, probation and parole as well as the prison system and about careers in the criminal justice system. Local and national current events are used for discussion of concepts covered in class.

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Foreign Language

Pre-AP Spanish Literature

Grades 9, 10, 11, 12

5 credits/ 10 credits

Semester/ Year

Prerequisite: C or better in Spanish III or Aprenda Score NCE score of 50 or higher

The Pre-AP Spanish Literature and Culture course uses a thematic approach to introduce students to representative texts (short stories, novels, poetry, and essays) from Peninsular Spanish, Latin American, and United States Hispanic literature. Students develop basic proficiencies across the full range of communication modes (interpersonal, presentational and interpretive), and hone their critical reading and analytical writing skills. Literature is examined within the context of its time and place, as students reflect on the many voices and cultures present in the readings. The course also includes a focus on cultural connections and comparisons, including exploration of various media (e.g., art, film, articles, literary criticism).

*Meets the Vocational Arts Requirement
Submitted for NCAA Requirement*

Translation and Interpretation 1

Grades 9, 10, 11, 12

5 credits/ 10 credits

Semester/ Year

Prerequisite:

This course is an introduction to the theory and practice of Translation and Interpretation, both from Spanish to English and from English to Spanish. Students learn the fundamentals of translation in a variety of fields: legal, medical, literary, business, commercial, media and in other domains. The course includes translation and interpretation techniques and supervised practice. This class is conducted in both Spanish and English, and the instructional materials and activities are bilingual as well.

Meets the Vocational Arts Requirement

Performing Arts

Chamber Singers Honors

Grades 10, 11, 12

5 credits/ 10 credits

Semester/ Year

Prerequisite:

- Student must audition into both the Chamber Singers Honors Class and the Conservatory of Music.
- Students must have demonstrated previous leadership and commitment to music and the arts (Required)
- Private Lessons (Group lessons or approved instructor) (Recommended)
- Participation in choral ensemble for all four years. (Required)

Chamber Singers Honors is a select group of advanced vocalists who have auditioned into the ensemble and are also a part of the Conservatory of Music. Special emphasis is placed on solo and performance as well as regular Chamber Choir rehearsal and performance, where students will take a leadership role. Students accepted into this ensemble will be expected to expand their mastery of music theory, music history and analysis, and write a research paper. These students will also be expected to take private voice lessons, either with the music teacher or with a local private instructor approved by the music teacher, or in the group lesson setting at the school site.

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Honors Symphonic Winds

Grades 10, 11, 12

5 credits/ 10 credits

Semester/ Year

Prerequisite:

- Student must audition into both the Symphonic Winds Class and the Conservatory of Music (Required)
- Students must be proficient on one or more instruments. (Required)
- Private Lessons (Group lessons or approved instructor) (Recommended)
- Participation in Marching Band for all four years (Required)

Symphonic Winds Honors is a select group of advanced instrumental musicians who have auditioned into the ensemble and are also a part of the Conservatory of Music.

Special emphasis is placed on solo and chamber performance as well as regular Symphonic and Marching Band rehearsal and performance, where students will take a leadership role. Students accepted into this ensemble will be expected to expand their mastery of music theory, music history and analysis, and write a research paper. These students will also be expected to take private lessons on their instrument, either with the music teacher or with a local private instructor approved by the music teacher, or in the group lesson setting at the school site.

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Science

AP Physics 2

Grades 11, 12

5 credits/ 10 credits

Semester/ Year

Prerequisite: AP Physics 1 with grade of C or better, Algebra 2 with grade of C or better

This course, in partnership with AP Physics 1, engages students in college-level physics with the expectation that students will take the AP exam in the spring semester. Topics covered include thermodynamics, electricity, magnetism, optics and nuclear physics.

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College Geology

Grades 11, 12

5 credits/ 10 credits

Semester/ Year

Prerequisite: C or better for the year in Chemistry and Algebra 2

This is a college-level course that covers the geologic processes affecting the solid earth and its atmosphere, oceans, and life forms. Emphasis will be placed on our knowledge of the evolution of the earth based on the rock and fossil record. Field and laboratory exercises will include the investigation of physical processes and materials, and the interpretation of environments and ecological associations. This course is offered for dual credit with CSU Bakersfield (Geo 201)

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