

2023-
2024

ISSUE 5

CCPA

COTTONWOOD COLLEGE PREP ACADEMY



COURSE CATALOG

ACADEMY BASICS

DESIGN THINKING CONCENTRATION

Table of Contents

- 02** Our Vision & Mission, Our Values, SLOs
- 03** Montessori Principles
- 04** Graduation Requirements, A-Gs
- 05** Design Thinking
- 06** Social Studies
- 07** English
- 09** Mathematics
- 11** Science (NGSS)
- 13** World Language
- 14** Visual & Performing Arts
- 15** College Prep Electives
- 16** College Courses
- 18** Furthering Education



OUR VISION AND MISSION

VISION (THE WHY)

CCPA'S VISION IS TO GUIDE OUR COMMUNITY TO LOVE LEARNING, TO PROFOUNDLY CONTRIBUTE TO OUR DIVERSE WORLD, AND TO LEAD LIVES OF ACHIEVEMENT.

MISSION (THE HOW)

CCPA, INFLUENCED BY MONTESSORI PRINCIPLES, WILL PROVIDE AN INNOVATIVE, RIGOROUS, SELF-EXPLORING EDUCATION THROUGH EXPERIENTIAL LEARNING, DESIGN THINKING, AND MEANINGFUL INTERDISCIPLINARY STUDIES CULTIVATING A GROWTH MINDSET.

OUR VALUES

CCPA STRIVES TO DEVELOP STUDENTS WHO ARE PREPARED TO BE PART OF AN INCREASINGLY COMPLEX, DEMANDING AND COMPETITIVE 21ST CENTURY. IN ADDITION TO BEING INFLUENCED BY MONTESSORI PRINCIPLES, TCHS VALUES THE SKILLS HIGHLIGHTED BY THE PARTNERSHIP FOR 21ST CENTURY SKILLS (P-21): COMMUNICATION, COLLABORATION, CRITICAL THINKING, AND CREATIVITY.

OUR STUDENT LEARNER OUTCOMES (SLOS)

Communication, Collaboration, Critical Thinking & Creativity with...

SELF-CONFIDENCE

EMPATHY

SELF-CONTROL

INTEGRITY

CURIOSITY

PERSEVERANCE

OPTIMISM

MONTESSORI PRINCIPLES

CCPA course of study blends Common Core, interdisciplinary project-based learning, and 21st Century Skills with the philosophy of Montessori.

STUDENT AGENCY

A growth mindset to take charge of their own learning.

FIELD STUDY

To foster agency, students are encouraged to explore their own interests by participating in week-long field studies linked to various themes and academic work. These may include mini courses and local and international trips.

ADVISORY

Advisory is all four years with the same group of students and same advisor. Advisors help students find educational resources, assist students to target key academic learning goals, work with mentors to ensure the rigor of internships and actively involve parents in their student's education.

SERVICE LEARNING

Service learning provides opportunities for students to become knowledgeable in specific areas of interest while serving local and global communities.

GRADUATION REQUIREMENTS

English	40 Credits
Social Science	30 Credits
Mathematics (must include Algebra 1 & Geometry)	20 Credits
Laboratory Science (Must include one life science and two physical sciences)	30 Credits
World Language	20 Credits
College Preparatory Electives including a Visual Performing Arts and an additional Algebra course	70 Credits 20 Credits
Total	230 Credits

A-G COLLEGE ENTRANCE REQUIREMENTS

Social Science "A" Requirement	2 years
English "B" Requirement	4 years
Mathematics "C" Requirement	3 years (two years-algebra & one-geometry) 4 years recommended
Science "D" Requirement	2 years with lab 3 recommended
Language Other Than English "E" Requirement	2 years of the same language 3 years recommended
Visual and Performing Arts "F" Requirement	1 year
Electives "G" Requirement	1 year

Design Thinking



The Course of Study

Grade 9

Grade 10

Grade 11

Grade 12

Design Thinking
Electives & Online
Electives (by CCPA)

NGSS Science

NGSS Science

NGSS Science

English 12

DT Electives
*Making &
Engineering Design
*Robotics CP/ADV
Online Electives
*Criminology
*Environmental
Science

English 9

English 10

English 11

American
Government/
Economics

Theater

World History CP/H

US History

AP Statistics or Pre-
Calculus

Algebra 1

Geometry

Algebra 2

Design Thinking
Senior Seminar

Social Studies

World History CP/AP

Meets A-Requirement

10 Credits

World History combines the principles of design thinking with the study of world history, fostering critical thinking, creativity, and global awareness. Aligned with the California state standards, this course explores key events, civilizations, and global interactions throughout history. Students will engage in collaborative projects, analyze primary and secondary sources, and develop problem-solving skills while applying design thinking strategies to real-world historical challenges.

US History CP/AP

Meets A-Requirement

10 Credits

US History combines the principles of design thinking with the study of United States history, fostering critical thinking, creativity, and historical empathy. This course explores key events, individuals, and movements that have shaped the nation's past. Students will engage in collaborative projects, analyze primary and secondary sources, and develop problem-solving skills while applying design thinking strategies to real-world historical challenges.

American Government

Meets A-requirement

5 Credits

American Government course combines the principles of design thinking with the study of American government and politics, empowering students to become informed, engaged, and innovative citizens. This course explores the foundations of American government, political institutions, and the rights and responsibilities of citizens. Students will engage in collaborative projects, analyze political issues, and develop critical thinking skills while applying design thinking strategies to real-world civic challenges.

Economics

Meets G-Requirement

5 Credits

Economics combines the principles of design thinking with economic concepts, encouraging students to become innovative problem solvers and critical thinkers. This course focuses on fundamental economic principles and their real-world applications. Students will engage in collaborative projects, analyze economic data, and develop entrepreneurial skills, all while applying the principles of design thinking to economic challenges.

English

English 9

Meets B-Requirement

10 Credits

English 9 combines the principles of design thinking with English language arts, fostering creativity, critical thinking, and effective communication skills. This course empowers students to explore literature, develop writing proficiency, and engage in collaborative projects while applying design thinking strategies to real-world challenges. Through interdisciplinary projects, students will enhance their reading, writing, speaking, and problem-solving abilities, preparing them for success in future English language arts courses.

English 10

Meets B-Requirement

10 Credits

English 10 is an innovative and immersive course, where the principles of design thinking and the power of project-based learning are blended to create an engaging and dynamic English language learning experience. Through a series of hands-on projects and real-world challenges, students will not only enhance their English language skills but also develop critical thinking, problem-solving, and collaboration abilities. Throughout the course, students will explore various aspects of the English language and communication while employing the principles of design thinking. By combining creativity, empathy, and iteration, they will tackle authentic problems and design effective solutions, all within the context of English language acquisition.

English 11

Meets B-Requirement

10 Credits

English 11 integrates design thinking principles with English language arts, empowering students to become creative problem solvers and effective communicators. This course focuses on advanced reading, writing, speaking, and critical thinking skills within a project-based learning framework. Students will engage in collaborative projects, analyze complex texts, and develop persuasive communication skills, all while applying the principles of design thinking to real-world challenges.

English

English 12

Meets B-requirement

10 Credits

English 12 course integrates the principles of design thinking with English language arts, empowering students to become creative problem solvers and effective communicators. This course focuses on advanced reading, writing, speaking, and critical thinking skills within a project-based learning framework. Students will engage in collaborative projects, analyze complex texts, and develop persuasive communication skills, all while applying the principles of design thinking to real-world challenges.

Design Thinking Senior Seminar

Meets G-requirement

10 Credits

The Design Thinking Senior Seminar course is a capstone experience designed to prepare students for post-secondary education, career pathways, and engaged citizenship. This course empowers students to apply design thinking principles to complex, real-world problems and develop the critical thinking, collaboration, and communication skills necessary for success in the 21st century. Students will engage in interdisciplinary projects, research, and reflective practices, culminating in a final project that showcases their growth and achievements.

Mathematics

Algebra 1 (Online)

Meets C-Requirement

10 Credits

In this course, students will demonstrate knowledge of algebraic functions. Students will develop and use mathematical thinking skills by reviewing linear equations, linear inequalities, linear functions (graphing and writing), systems of linear equations and inequalities, exponential functions, absolute values, polynomial expressions and factoring, graphing quadratic functions, solving quadratic equations, and displaying and analyzing data. During this course, students will be able to demonstrate the ability to use algebraic functions necessary for success in Algebra 2, Pre-Calculus, or other advanced math courses.

Algebra 2 (Online)

Meets C-Requirement

10 Credits

In this course, students will demonstrate the ability to bridge knowledge from Algebra 1 and prepare for Advanced Mathematics/Pre-Calculus. Students will develop and use mathematical thinking skills by reviewing basic linear algebra, quadratics, polynomial, exponential, and logarithmic functions, sequences, series, a more thorough view of trigonometry, statistics, and probability. An emphasis on the use of a calculator and online programs will be provided in order to assist problem-solving skills. The mathematical thinking skills in this course will prepare students for future success in college-level coursework.

Geometry (Online)

Meets C-Requirement

10 Credits

In this course, students will demonstrate knowledge of complex geometric situations and deepen their explanations of geometric relationships, presenting and hearing formal mathematical arguments. Students will develop and use mathematical thinking skills by analyzing properties (lines, angles, triangles, etc.) and applying algebraic relationships to quantify their measurements. Through this course, students will learn a variety of skills including how to properly identify all characteristics and their measurements given any 2-D or 3-D figure. The mathematical thinking skills in this course will prepare students for future success in college-level coursework or in career paths that depend on spatial thinking.

Mathematics

Pre-Calculus (Online)

Meets C-Requirement

10 Credits

In this course, students will demonstrate knowledge of mathematics concentrating on advanced algebra and functions, trigonometry, analytic geometry, and discrete mathematics. Students will develop and use mathematical thinking skills by applying appropriate models to draw conclusions and learn to use technology in solving real-world problems. During this course, students will demonstrate the ability to use mathematical functions necessary for success in Calculus, or other advanced math courses.

AP Statistics (Online)

Meets C-Requirement

10 Credits

Major themes include data analysis, probability calculations, sampling methods, and statistical inference. After successfully completing this course, students should be able to receive college credit when taking the AP Statistics exam given by College Board. Even if students do not take the AP exam, they should have a strong, solid statistical background to be able to test out of the Introduction to statistics course in college.

Science (NGSS)

Integrated Physical Science

Meets D-Science Requirement

10 Credits

Integrated Physical Science is an interactive course that combines the principles of design thinking with the study of integrated physical science, aligned with the Next Generation Science Standards (NGSS). In this course, students will engage in project-based learning to explore the fundamental concepts of physics and earth science, investigate real-world problems, and develop innovative solutions using the design thinking process. Through hands-on experiments, scientific inquiry, collaboration, and reflection, students will deepen their understanding of physical science while honing their critical thinking, problem-solving, and communication skills. This course aims to foster curiosity, creativity, and a comprehensive understanding of the interconnectedness of physical science and its applications in real-world contexts.

Biology

Meets D-Life Science Requirement

10 Credits

Biology is an immersive course that integrates the principles of design thinking with the study of biology, aligned with the Next Generation Science Standards (NGSS). In this course, students will engage in project-based learning to explore fundamental biological concepts, investigate real-world problems, and develop innovative solutions using the design thinking process. Through scientific inquiry, experimentation, collaboration, and reflection, students will deepen their understanding of biology while honing their critical thinking, problem-solving, and communication skills. This course aims to foster curiosity, creativity, and a deep appreciation for the interconnectedness of biology and society.

Science (NGSS)

Chemistry

Meets D-Science Requirement

10 Credits

Chemistry is an innovative course that combines the principles of design thinking with the study of chemistry, aligned with the Next Generation Science Standards (NGSS). In this course, students will engage in project-based learning to explore core chemistry concepts, investigate real-world problems, and develop creative solutions using the design thinking process. Through scientific inquiry, experimentation, collaboration, and reflection, students will deepen their understanding of chemistry while honing their critical thinking, problem-solving, and communication skills. This course aims to foster curiosity, creativity, and a deep appreciation for the role of chemistry in addressing societal challenges.

Environmental Science (Online)

Meets D-Life Science Requirement

10 Credits

Environmental Science is a dynamic course that combines the principles of design thinking with the study of environmental science. In this course, students will engage in project-based learning to explore the intricate relationships between the environment, human society, and sustainability. Through hands-on projects, scientific inquiry, collaboration, and critical thinking, students will deepen their understanding of environmental concepts and develop innovative solutions to real-world environmental challenges. This course aims to foster a sense of environmental stewardship, creativity, and a comprehensive understanding of the intersection between design thinking and environmental sustainability.

World Language

Spanish 1 (Online)

Meets E-Requirement

10 Credits

In this course, learners will be introduced to the four essential language skills: speaking, writing, reading, and listening. In addition to studying the culture of various Spanish-speaking countries, learners will also learn greetings, verb conjugations, basic vocabulary, pronunciation, and grammatical structures. They will learn to communicate in the target language using topics of family and friends, foods, traveling, sports and shopping in the present and past actions.

Spanish 2 (Online)

Meets E-Requirement

10 Credits

Spanish 2 is a language course designed for students who have successfully completed their first year of Spanish. Students continue their study of Spanish in order to comprehend listening and reading passages. Additionally, students express themselves meaningfully in speaking and writing. Each unit consists of a new vocabulary theme and grammar concept, reading and listening comprehension activities, speaking and writing activities, multimedia cultural presentations, and interactive activities which reinforce the new vocabulary and grammar throughout. Students will be actively engaged in their own language learning, understand common vocabulary terms and phrases, use a wide range of grammar patterns in their speaking and writing, participate in conversations and respond appropriately to conversational prompts.

Visual and Performing Arts

Theater 1

Meets F-Requirement

10 Credits

Theater 1 combines the principles of design thinking with the study and practice of theater arts, fostering creativity, collaboration, and critical thinking skills. Aligned with the California state standards, this course provides an introduction to the fundamentals of theater, including acting, stagecraft, and theater production. Students will engage in collaborative projects, explore dramatic works, and develop their artistic abilities while applying design thinking strategies to create innovative theatrical experiences.

College Prep Electives

Making & Engineering Design

Meets G-Requirement

10 Credits

In this course, students will learn how to use a variety of tools and technologies in order to design, prototype, and develop their own creations. Through a diverse series of projects, ranging from whimsical to practical, students develop fluency in current technologies, grow as empathetic creators and collaborators, and become a part of the worldwide Making community.

Advanced Robotics

Meets G-Requirement

10 Credits

Students will continue their work from Intermediate Robotics to work in engineering teams to design, build and test increasingly complex robots. The course will illustrate the importance of integrating sensors, and complex machine control, and briefly discuss robot learning and multi-robot systems. Students will be expected to solve challenges using physical robots and computer simulations. Students will work in teams to complete a larger design problem and participate in local and regional VEX competitions. Special attention will be paid to the design process and its communication through both presentation and documentation. Students will explore additional hardware and software solutions to robotics problems. Students will learn advanced hardware and software techniques, as well as the physical sciences to understand them. Students will use additional hardware and software platforms to understand robotics applications (Arduino, parallax, etc.)

Criminology (Online)

Meets G-Requirement

10 Credits

Criminology is an immersive course that combines the principles of design thinking with the study of criminology. In this course, students will engage in project-based learning to explore the complexities of crime, criminal behavior, and the criminal justice system. Through hands-on projects, research, collaboration, and critical thinking, students will deepen their understanding of criminological theories and develop innovative solutions to real-world crime-related challenges. This course aims to foster analytical thinking, creativity, and a comprehensive understanding of the intersection between design thinking and criminology.

College Courses

Folsom Lake College:

Sign Language Studies (SILA)

SILA 305: American Sign Language 1

Meets E-Requirement

10 HS Credits/4 College Units

This is a beginning course in a series of four courses in American Sign Language, ASL. ASL employs the visual language, which Deaf Americans and Deaf Canadians use. The instructional activities are based on an immersion approach, in which the learners develop the language competency to communicate with ASL users. This course is designed for students who have limited or no exposure to ASL. Moreover, engagement of an audism-free environment will be fostered in the classroom. Students may be required to attend local deaf event(s). This course is also transferrable to both the CSU and UC systems.

Sierra College:

Business (BUS)

BUS 0201: Financial Accounting I

Meets G-Requirement

10 HS Credits/3 College Units

Principles of accounting and recording transactions within the accounting cycle. Students analyze financial statements, compare and contrast different forms of business entities, and discuss internal controls for entities to reduce the risk of fraud. Topics also include the preparation of a bank reconciliation, petty cash transactions, inventories, and the cost of goods sold. This course is also transferrable to both the CSU and UC systems.

College Courses

Communication Studies (COMM)

COMM 0001: Fundamentals of Public Speaking

Meets G-Requirement

10 HS Credits/3 College Units

An introduction to the theory and techniques of public speaking in a democratic society including essential principles and skills of public speaking. Discovery, development, and criticism of popular speaking in public discourse through research, reasoning, creative expression, culture, organization, composition, and presentation including informative, persuasive, and storytelling modes. Research and formal outlines are required for all major speeches. This course is transferable to both the CSU and UC systems.

French (FREN)

FREN 0001: Elementary French - Level 1

Meets E-Requirement

10 HS Credits/4 College Units

Listening, speaking, reading, and writing in French. Fundamentals of French pronunciation and grammar. Introduction to the culture of the French-speaking people. Corresponds to two years of high school study. This course is also transferable to both CSU and UC systems.

Sacramento City College:

Deaf Culture and American Sign Language Studies (DEAF)

DEAF 310: American Sign Language I

Meets E-Requirement

10 HS Credits/4 College Units

This is the beginning course in a series of four courses in the visual-gestural processes of American Sign Language (ASL). It provides instructional activities for students to become competent in communication with deaf people. The emphasis is on non-speech communication. This course is also transferable to both the CSU and UC systems.

Furthering Education

Community College

There are 116 community colleges throughout the state of California.

Admission Requirements

Students who are high school graduates with a diploma or the equivalent

Cost

The average tuition cost for California Community Colleges was around \$1,300 per year.

Application Process

The application process for community college varies from campus to campus. To apply to community college visit <https://home.cccapply.org/en/apply> or scan the QR code below and choose the desired college to attend.

Concurrent Enrollment

High School students may be enrolled in concurrent courses at a community college



California State University (CSU) System

There are 23 campuses throughout California in the CSU system. All campuses offer bachelor's and master's degree programs in a wide variety of majors.

Minimum Admission Requirements

1. Be a high school graduate or equivalent;
2. Complete the 15-unit comprehensive A-G pattern of college preparatory course; and
3. Earn a qualifying "a-g" grade point average as described below.
 - a. California residents and graduates of California high schools will be eligible for admission by earning a 2.50 or greater A-G GPA.
 - b. Any California high school graduate or resident of California earning a GPA between 2.00 and 2.49 may be evaluated for admission based upon supplemental factors such as the number of courses exceeding minimum A-G requirements, household income, extracurricular involvement, and other available information that would inform the campus admission decision.

Furthering Education

California State University (CSU) System

Cost

The estimated cost of attendance of a CSU campus is between \$3,330-\$5,742 per semester. Actual cost will vary depending on personal expenses and the CSU campus attended.

Application Process

Applications for the CSU system can be completed on-line by visiting <https://www.calstate.edu/apply> or by scanning the QR code below. Applications for priority filing are due between October 1-November 30. The application fees for 2022-2023 were \$70 per campus.



University of California (UC) System

The UC system currently has nine campuses for students to choose from. The UC campuses offer a wide variety of both Undergraduate and Graduate programs.

Minimum Admission Requirements

1. Complete 15 A-G courses with a letter grade of "C" or better. 11 of these courses must be completed prior to senior year of high school.
2. Earn a grade point average (GPA) of 3.0 or better in the A-G courses with no grade lower than a "C".

Cost

The total estimated cost for UC campuses for 2023-2024 is between \$37,000 to \$41,000. Actual cost will vary depending on personal expenses and the UC campus attended.

Application Process

Applications for the UC system can be completed on-line through <https://apply.universityofcalifornia.edu/my-application/login> or by scanning the QR code below. Applications for each fall semester are due between October 1-November 30 of the year prior. The application fee for 2022-2023 was \$70 per campus.



Furthering Education

Private Universities & Out-of-State Public Universities

There are more than 1,600 colleges and universities in the United States that all offer a wide variety of majors and degree options. Students interested in attending a private/out-of-state university will need to research the specific application and eligibility requirements (including deadlines, test score requirements, fees, and supplementary documentation) for the desired school of attendance. Many schools use the Common Application, which can be completed by visiting <https://www.commonapp.org/> or by scanning the QR code below.



ASVAB Testing

The ASVAB (Armed Services Vocational Aptitude Battery) test is a timed, multi-aptitude test that is used to determine if a person is a good fit to join the military. It also predicts what branch and individual might fit into best as well as what military jobs the individual would excel in once boot camp or basic training is completed. For students who do not wish to join the military, this test is also useful because it gives them insight into the types of professions that they may do well in. This test is administered to 10th through 12th graders.

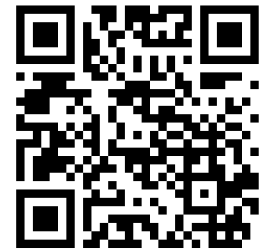
To find practice tests for the ASVAB visit <https://www.military.com/join-armed-forces/asvab> or scan the QR code below.



Furthering Education

Vocational/Technical/Trade Schools

There are thousands of technical/vocational schools in the US that teach a wide variety of skills for a wide variety of careers including, but not limited to, plumbing, electrician, HVAC technician, and automotive technician. Admission requirements and cost of these schools vary depending on the duration of the education and the type of school attended. Students can visit <https://www.trade-schools.net/> or scan the QR code below to find a variety of trade/vocational schools in a wide variety of fields of study across the United States.



Scholarships & Financial Aid

There are many financial aid options for students who choose to pursue higher education. These options help students and their families to offset the cost of tuition and books for colleges, universities, or vocational schools.

Forms of Financial Aid

1. **Scholarships:** Scholarships are awarded as a gift based on ability in academic work, athletics or other activities. Scholarships are provided by and through the institutions attended and private parties such as non-profit organizations. Scholarships are a great option because they do not have to be repaid.
2. **Grants:** Grants are awarded primarily based on financial need, which is based on parent and student income. Grants are provided by the individual educational institutions attended by students, the Federal or State Government, private parties, and non-profit organizations. Like scholarships, grants do not need to be repaid.
3. **Loans:** Educational loans are provided by the government and are generally catered to the needs of each student. Loans must be repaid and they also incur interest. The repayment period and interest generally do not start until 6 months after leaving school or graduating.

Furthering Education

Scholarships & Financial Aid

Applying for Financial Aid

Families and students that wish to apply for financial aid for school can fill out the Free Application for Federal Student Aid (FAFSA) form by visiting <https://studentaid.gov/h/apply-for-aid/fafsa> or by scanning the QR code below.



Families that wish to apply for scholarships can research available scholarships through the desired institution, the organization providing the scholarship, by visiting websites that provide scholarship information, or the private party that is awarding the scholarship.