



SDUHSD High School Career Technical Education (CTE) Course Descriptions

Please refer to the school site for specific course profiles and offerings

[Canyon Crest Academy](#) [La Costa Canyon](#) [Torrey Pines](#) *Coming Soon!* [San Dieguito Academy](#)

*UC Approved Course *Community College Matriculated Course*

Canyon Crest Academy Pathways

Pathway	Introduction	Concentration	Capstone	Enrichment
Business Management	Intro to Business Management*	<i>Marketing Principles*</i>	Advanced Business Management*	Business Math
Design, Visual & Media Arts	Drawing and Design*	Fine Art Digital Photo*	<i>Photo Imaging* (K7668)</i>	Advanced Fine Art Digital Photo*
Engineering Technology	Intro to Engineering*	Digital Electronics*	Advanced Engineering & Technology *	
Film, Video Production		Video Film*	Advanced Video Film*	Cinema Conservatory, Digital Media Production, Cinema Lab
Graphic Design	Drawing and Design*	Digital Art & Design* (formerly <i>Imaging</i>)	Advanced Digital Art & Design (formerly <i>Advanced Digital Imaging</i>)	
Performing Arts (Professional Music)		Digital Composition (K7684)	Recording Arts (K7685)	Advanced Recording Arts Envision Conservatory Rock Band Music Industry
Software, Systems Development	Exploring Computer Science*	AP Computer Science Principles*	AP Computer Science A*	Computer Game Design

La Costa Canyon Pathways

Pathway	Introduction	Concentration	Capstone	Enrichment
Business Management		<i>Intro to Business Management* (A7952)</i> <i>Marketing Principles* (A7670)</i>	Advanced Business Management* (A7551)	
Design, Visual & Media Arts (Graphic Design)		Digital Art and Design* (B6560) (formerly <i>Imaging</i>)	Advanced Digital Art and Design (B6559) (formerly <i>Advanced Digital Imaging</i>)	
Education		Child Development 1* (H7510)	Teaching and Learning* (H7700)	
Fashion Design & Merchandising		Fashion Design 1* (H7521)	Fashion Design 2 (H7526)	
Food Service & Hospitality		Culinary Arts 1* (H7512)	International Cuisine (H7519)	
Production & Managerial Arts (Professional Theater)	Introduction to Professional Theater (B6586)	Intermediate Professional Theater (B6587)	Advanced Professional Theater (B6588)	Stagehand Tech Drama Production
Software & Systems Development	Exploring Computer Science* (A7649)	AP Computer Science Principles*(A7590P)	AP Computer Science A* (A7653P)	

San Dieguito Academy Pathways

Pathway	Introduction	Concentration	Capstone	Enrichment
Cabinetry, Millwork & Woodworking	Intro to Technology (K7658)	Wood Tech 1 (K7571)	Wood Tech 2 (K7573)	Internship Guitermaking
Design, Visual & Media Arts (Graphic Design)	Intro to Technology (K7658)	<i>Digital Photo (K7660)</i>	Photo Imaging* (K7668)	Internship Photo Tech II
Engineering Design	<i>Metals 1* (K7561)</i>	Robotics/Engineering Tech* (K7673)	Advanced Engineering & Technology* (K7672)	Team Paradox, Internship
Film, Video Production		Video Film* (B6581)	Advanced Video Film* (B6955)	
Food Service & Hospitality		Culinary Arts 1* (H7512)	Culinary Arts 2 (H7530)	Sous Chef (H7534) Internship
Machining & Forming Technology	<i>Metals 1* (K7561)</i>	Welding/Metals Fabrication* (K7503)	Metals 2* (K7562)	Internship
Software & Systems Development	Computer Game Design (A7507) Exploring Computer Science* (A7649)	AP Computer Science Principles* (A7590P)	AP Computer Science A* (A7653P)	Internship
Systems, Diagnostics and Service Repair	Intro to Technology (K7658)	<i>Auto Tech (K7551)</i>	<i>Auto Engineering Performance (K7552)</i>	Internship

Torrey Pines Pathways

Pathway	Introduction	Concentration	Capstone	Enrichment
Business Management		<i>Intro to Business Management* (A7952)</i> <i>Marketing Principles* (A7670)</i>	Advanced Business Management* (A7551)	Internship
Cabinetry, Millwork and Woodworking		Wood Tech 1 (K7571)	Wood Tech 2 (K7573)	
Design, Visual & Media Arts (Graphic Design)		Fine Art Digital Photo* (B6562) Digital Art and Design*(B6560) <small>(new course title for Imaging)</small>	Advanced Digital Art and Design (B6559) <small>(new course title for Adv. Digital Imaging)</small>	AP Studio Art 2D AP Studio Art Drawing
Film/ Video Production		Video Film* (B6581)	Adv Video Film* (B6955)	Digital Media Production Cinema Lab
Engineering Technology	Intro to Engineering Techniques* (K7657)	CAD/Fabrication (K7640)	Advanced Engineering & Technology* (K7672)	
Food Service & Hospitality		Culinary Arts 1 (H7512)	Culinary Arts 2 (H7530)	Sous Chef
Software & Systems Development	Exploring Computer Science* (A7649)	AP Computer Science Principles* (A7590P)	AP Computer Science A* (A7653P)	Computer Programming Comp Game Design
Systems, Diagnostics, Service & Repair		<i>Auto Tech (K7551)</i>	<i>Auto Engineering Performance (K7552)</i>	Street Masters Car Club



SDUHSD CTE PATHWAYS & COURSES FOR 2018-2019

Please note: SDUHSD Pathways are listed alphabetically.

Business Management Pathway

(Business & Finance Sector)

Concentration Courses:

Intro to Business Management (CCA, LCC, TP)

Designed for Freshman and Sophomores looking to explore the business world, this course covers leadership styles and economics, personal finance and soft skills, while providing a background in business. A popular elective for anyone contemplating the wonderful world of Business, students will engage with their peers, business professionals, and their community to actively practice the 21st Century skills of Communication, Collaboration, Creativity and Critical Thinking. Coursework includes Entrepreneurship, Marketing, Management, Finance, and an introduction to the Stock Market.

Marketing Principles (CCA, LCC, TP)

Marketing is a dynamic elective popular with those students wishing to explore the creative, ever-changing world of business. With a focus on real life business situations, Marketing gives the potential business major a behind-the-scenes look at what really happens in our economy. Upon completion of the course, the student will have the capabilities to practice and understand basic Marketing principles that include advertising, promotional strategies, public relations and publicity, consumer behavior and promotional ethics. Use of shows like Shark Tank and websites such as Fortune.com and Advertising Age give up-to-date looks at entrepreneurs and today's business climate. The course combines problem-solving instruction, hands-on projects utilizing computer applications, speakers from the community, case studies, and simulations.

Capstone Courses:

Advanced Business Management (CCA, TP)

Today's changing economy requires creative, resourceful and visionary students. This Capstone class will invite students to apply their Business knowledge to projects and case studies as well as an intense look at today's business environment. Students will use their developing leadership skills to run business simulations, cooperate with peers on group exercises, and study the current business environment through cases and field trips. Students will become fluent in the reading of business websites like Fortune.com, Inc.com, Advertising Age, Business Week, Yahoo Finance and Investopedia. Students will hone presentation skills through class presentations, group projects, and community interactions. Software & languages that may be used: Microsoft Excel, Word and PowerPoint, Adobe Photoshop, Illustrator, Google docs.

Enrichment Courses:

Accounting Principles (TP)

Accounting Principles introduces students to the concepts and theory of accounting in the double-entry accounting system. It provides a strong foundation of the basic accounting principles and applications for students entering college and majoring in Accounting or Business Administration. Students are required to think critically and problem solve as they analyze transactions, complete steps in the accounting cycle and correct errors. Students will learn the accounting practices for both a proprietorship in a service business and a merchandising business organized as a corporation. Accounting Principles teaches the accounting cycle including analyzing business transactions using journals, ledgers, worksheets, financial statement preparation and interpretation, payroll procedures, banking and the petty cash system. Accounting software used in industry, such as QuickBooks, and Excel may be used to introduce and train students in current accounting practices. Real-life applications are achieved through use of working papers and Simulations.

Cabinetry, Millwork & Woodworking Pathway

(Building and Construction Trades Sector)

Introductory Courses:

Introduction to Technology (SDA)

Introduction to Technology is designed to introduce the various interrelated aspects of modern technology as they apply to the general academic curriculum. Students will explore fields ranging from Business, Communications, Manufacturing, Drafting, Power, Design and Study Skills. The course rotates students through each area in a series of “mini-courses” that last approximately three weeks. Students are exposed to modern as well as traditional approaches to design, problem solving and production.

Concentration Courses:

Wood Tech 1 (SDA, TP)

Wood Technology 1 includes instruction in the following areas: Planning and layout, wood selection, related math, hand tools, use procedures, machine tool operations, use of abrasives, basic maintenance, gluing, clamping and assembly techniques. This course will give a student a broad overview of woodworking.

Capstone Courses:

Wood Tech 2 (SDA, TP)

Wood Technology 2 is a pre-vocational course designed to further the students' knowledge of woodworking. Advanced layout and design will be introduced at this level. After basic requirements are complete, students will be expected to plan and construct a product of their own design. Cabinet design and construction is emphasized.

Enrichment Courses:

Guitarmaking (SDA)

Students signed up for guitar making will begin by building a stratocaster inspired solid body electric guitar. The first semester is spent building the body of the guitar. Students often want to build more complex instruments as their first project. After building your first guitar you will have enough experience to build a more complex instrument. The lessons will focus on using the Jointer, Planer, Band saw, and Routers to fashion the body blank into a fully functioning body with electronics installed. The second semester is spent on building the neck of the guitar. Students will experience specialty tools not used in common woodworking processes. Our shop is equipped with a cnc router to mill body blanks, a metal working mill to accurately mill truss rod cavities, a gang fret saw to mill slots in one pass, and a moulder for milling the 12" radius required for standard stratocaster guitars. When this course is completed students will understand how to build electric guitars from start to finished product.

Education Pathway

(Development and Family Services Sector)

Concentration Course:

Child Development 1 (LCC)

This course is designed to introduce students to the field of child development. Students will learn about children's social, emotional, physical, and mental growth and development as well as how to provide for their care and guidance. Activities include hands-on creation of children's learning stations, creating toys, writing and designing children's books, and interacting with children of various ages on field trips to local childcare settings. Topics of study include prenatal development, genetics, health and safety, guidance and discipline, cultural diversity, and child abuse and neglect. Students can also receive Red Cross Babysitter training leading to certification. This course provides a solid



foundation for any career that involves working with children and leads to the Teaching & Learning course in the Education Pathway. No transportation required; appropriate for 9-12 graders.

Capstone Course:

Teaching and Learning (LCC)

Formerly called Child Development, this concentration course is designed to give students an internship experience working with children in supervised elementary classrooms. Students will travel to local elementary schools on an almost daily basis. They will work closely with a local elementary school teacher to gain hands-on experience in many aspects of educating children in the classroom. Students will plan lessons, teach in small groups, be a role model to young children, work one-on-one with children, supervise play, assist teachers with various teaching related duties, and lead activities with the children in the classroom. This course is a great foundation experience for anyone interested in working with children in any capacity after high school. Transportation or walking required. Appropriate for 10-12 graders.

*This course is also offered at TP as a non-CTE course.

Engineering Design Pathway

(Engineering & Architecture Sector)

Introductory Courses:

Metals 1 (SDA)

Metals 1 [UC approved G elective] is an introductory course that students can take in both the Engineering and Machining and Forming Technologies pathways. Instruction introduces students to the following areas and machines: precision measurement, introduction to welding, layout, grinding, sawing/cutting, drill press, lathe, vertical mill, plasma cutting, laser cutter, 3D printing, blacksmithing, jewelry making and computer numerically controlled machines. Students will learn to read plans, gain basic computer aided design skills and build several projects in a high tech machine shop.

Concentration Courses:

Robotics & Engineering Technology (SDA)

Robotics and Engineering Technology is built around the fundamental understanding of the systems that make up robots and the development of industry practices. The main focus of the class involves solving engineering design problems. Students will design and build a mobile robot to play a sport-like game. During this process they will learn key STEM principles and robotics concepts. At the culmination of this class, they will compete head-to-head against their peers in a classroom, or in a regional/national competition. This course encompasses aspects of mechanical, electrical, programming and industrial design.

Capstone Courses:

Advanced Engineering & Technology (SDA)

Advanced Engineering & Technology is a year long, project-based class built around an extensive understanding of engineering systems and the incorporation of industry practices. The main focus of the class involves solving advanced large scale engineering design problems. Students enrolled in this course will collaborate to design, create and test both larger scale individual and group projects that include but are not limited to aspects of Mechanical, Electrical, Civil, Industrial and Environmental Engineering. This course is UC approved.

Enrichment:

Architectural Design (SDA)

This course meets the 10 unit UC Visual & Performing Arts Fine arts requirement and earns 3 credits of Mira Costa community college credit if certain requirements are met. The class will focus on learning the history and art of architectural design in order to have the student produce several sketches, renderings, structures, and models. These will be produced by hand and with a computer. Many mediums will be used such as pencils, charcoal, pen, watercolor, and computer aided design software. Complete or partial three-dimensional models will also be built by hand and be created on the computer in order to gain a deeper understanding of volume, space, textures, forms, lines, and various art forms to develop interior and exterior living areas. The class will use Revit software to complete a multiple page set of residential house plans and presentation plan.

Engineering Technology Pathway

(Engineering & Architecture Sector)

Introductory Course:

Intro to Engineering Techniques (CCA, TP)

Introduction to Engineering Techniques provides students with tools to pursue further study in engineering. This includes but is not limited to the study of strengths of materials, electronic circuits, mathematical analysis, and engineering design. Coursework is heavily project based learning as well as reading texts and writing. Assignments will be from various fields of engineering including Mechanical, Electrical, and Aerospace. The class is intended for those interested in exploring engineering as a career or seeking a CTE class that is connected to STEM. This course is UC Approved. *At some sites this course was called Principles of Engineering.

Concentration Courses:

Digital Electronics (PLTW) (CCA)

Digital Electronics is the study of electronic circuits that are used to process and control digital signals. In contrast to analog electronics, where information is represented by a continuously varying voltage, digital signals are represented by two discrete voltages or logic levels. This distinction allows for greater signal speed and storage capabilities and has revolutionized the world electronics. Digital electronics is the foundation of all modern electronic devices such as cellular phones, multimedia players, laptop computers, digital cameras, high definition televisions, etc. The major focus of the DE course is to expose students to the design process of combinational and sequential logic design, teamwork, communication methods, engineering standards, and technical documentation.

Capstone Courses:

Advanced Engineering & Technology (CCA)

Advanced Engineering & Technology is a year long, project-based class built around an extensive understanding of engineering systems and the incorporation of industry practices. The main focus of the class involves solving advanced large scale engineering design problems. Students enrolled in this course will collaborate to design, create and test both larger scale individual and group projects that include but are not limited to aspects of Mechanical, Electrical, Civil, Industrial and Environmental Engineering. This course is UC approved.

CAD/Fabrication (TP)

CAD/FAB will introduce students to the design process from theory to prototype. Students will use AutoDesk Fusion 360 to create drawings of parts and/or architectural designs and implement them into a finished product with industry standard tools, supplies, and equipment. CAD/FAB provides students with the skills needed to turn ideas for an object into a real physical product. Students will produce drawings using industry standard CAD programs. The drawings can be fed in devices like 3D printers for rapid prototyping and exported to blueprints for project completion. All project support understanding of curriculum, design and materials.

Enrichment Course:

Robotics & Engineering Technology (CCA, SDA)

Robotics and Engineering Technology is built around the fundamental understanding of the systems that make up robots and the development of industry practices. The main focus of the class involves solving engineering design problems. Students will design and build a mobile robot to play a sport-like game. During this process they will learn key STEM principles and robotics concepts. At the culmination of this class, they will compete head-to-head against their peers in a classroom, or in a regional/national competition. This course encompasses aspects of mechanical, electrical, programming and industrial design.

Fashion Design & Merchandising Pathway

(Fashion and Interior Design Sector)

Concentration Course:

Fashion Design 1 (LCC)

This is fashion design course which applies elements and principles of design, history of fashion, explores careers related to fashion design, manufacturing and merchandising, and gives students the opportunity to create their own custom apparel.

Capstone Course:

Fashion Design 2 (LCC pilot)

Students will expand on the skills necessary for a career in fashion design. Students will be prepared to understand the social, psychological, physiological and design aspects of fashion, textiles, and apparel. Instruction includes apparel and behavior, elements and principles of design, color theory, wardrobe planning; history of apparel, specialized clothing, wardrobe budgets, retail options, textiles, garment care, alterations, personal and family clothing selection and purchase; design and construction of clothing, utilizing of advanced construction techniques; couture design elements; and modification of clothing to meet the special needs of individuals. This course is highly recommended for students interested in pursuing a career in the fashion industry.

Film/Video Production Pathway

(Arts Media and Entertainment Sector)

Concentration Courses:

Video Film (CCA, SDA, TP)

Video/Film: History, Criticism and Practice is a course for students to study the historical progression of filmmaking. Students experience the process of filmmaking and videography from inception of an idea to completion of a digital-based project, based on making connections to the social and political history that influences filmmaking and filmmakers. The students view film and student video projects from a critic's perspective and write and express critical reviews of both professional and student films and videotapes. Students learn the terminology and the techniques associated with filmmaking and videography. Students create video projects and use sophisticated computerized editing systems to make multi-layered, creative and aesthetic video expressions. They invent an idea, write scripts and draw storyboards, shoot video footage and edit it into a clear communication or artistic expression about their world.

Capstone Course:

Advanced Video Film (CCA, SDA, TP)

Advanced Video/Film is a year-long elective course in which students are able to pursue their own interests and specialities in video/film production. The primary purpose of the course is to offer advanced learning opportunities to the most motivated and talented students from Beginning Video-Film class. A second goal is to engage them further in exploration on their own creative potential while introducing them to advanced video/film techniques.

Enrichment Courses:

Advanced TV Production (TP)

10-12 grade, application required. Become a part of TP's first TV production and school-based broadcast news program! Students will learn skills in broadcast journalism, writing for packages and on-air delivery, interviewing techniques, videography, editing and much more. Prior Adobe Premiere editing experience is required. Creativity and willingness to work hard to make this a great success is mandatory.

Cinema Lab (CCA)

Cinema Lab is a course that is offered to one to four students during any of the other Envision Cinema day classes. These students will work on independent projects and prepare portfolio work for college and career opportunities in the video, film, or television industry. Students will explore, create, evaluate, and criticize cinema as an art form. Students will also develop skills for cinematography, editing, script writing, equipment organization and maintenance, leadership, marketing and public relations. Using the art elements of form, color and value, they will create and communicate meaning through video and film production.

Cinema Conservatory (CCA)

Cinema Conservatory is an audition-based, after-school extension of the daytime Envision Cinema program, offering smaller class sizes and more individualized instruction for the most advanced film students. The Cinema Conservatory offers an active approach to filmmaking technique and theory. Workshops intend to build upon and supplement daily production experience and are taught by a variety of practicing artists. The focus of the Conservatory is narrative or documentary video production. Students develop original screenplays, pitch their ideas, coordinate, cast, and produce short films in teams and on their own. All projects are intended for submission to student film festivals. Evaluation of students will be linked to successful festival submission. The collaborative nature of the arts ensures that Conservatory students enjoy many opportunities to work with and learn from one another. A focus on interdisciplinary collaboration is best witnessed during the Conservatory-wide event called the Projects. Projects put all Conservatory students on interdisciplinary teams of twelve to fifteen artists for a weekend at the beginning of the year.

Digital Media Production (CCA)

This course provides entry-level and intermediate training in the creation of television programming and the operation of television equipment. Employment possibilities include film/tape editor, camera operator, scriptwriter, set designer, on-air talent and music scorer. Instruction covers the following areas: production of programming, listening and speaking skills, script writing and critical thinking. Students use equipment, which includes the television camera, editing console, special effects console and sound system.

TV Production (TP)

This course is a basic introduction to editing and making elements for television. Students will learn basics in video camera work, interview skills, audio recording, lighting, studio setup, and creating stories for school news programs. Students will get hands on learning by attending events that they will film and then edit into a story to share with the school. TV Production offers instruction and training in pre-production, production, and post production practices. Those who successfully complete this class will be prepared to enter a college journalism broadcast or media class.

Food Service and Hospitality Pathway

(Hospitality, Tourism and Recreation Sector)

Concentration Courses:

Culinary Arts 1 (LCC, SDA, TP)

This introductory course is designed to teach students basic concepts in food preparation, food safety, nutrition, workplace skills, and related culinary concepts. Students will practice hands-on skills, follow written and verbal directions, and maintain a safe, sanitary work environment while they plan, prepare, cook, and enjoy a variety of dishes while working as a team with their classmates. This course is designed to teach students career and technical skills that they can use and build upon for years to come in their personal lives, the community and the workplace. This course fulfills SDUHSD Practical Arts and an Area G elective credit in the CSU & UC systems.

Capstone Courses:

Culinary Arts 2 (TP, SDA)

Culinary Arts Level 2 is designed to further develop skills of advanced culinary students. This course will build on culinary skills students have previously learned in Culinary Arts 1. This course will introduce new and challenging techniques, ingredients, and concepts in Culinary Arts.



There is a significant hands-on component as students will participate in culinary labs while preparing and analyzing a variety of recipes. Culinary Arts Level 2 is designed for students who are interested in a career in the Food Service and Hospitality Industry but is also applicable to the home cook. This course fulfills SDUHSD Practical Arts credit. ***Note: SDA Culinary Arts 2 includes “International Cuisine” and “Baking and Pastry” curriculum.**

International Cuisine (LCC)

This is an advanced course that furthers the hands-on cooking experience beyond Culinary Arts. In this course we use higher level cooking techniques while exploring the history, culture, recipes, and cooking methods of many different countries around the world. This class also explores various aspects of hospitality service and careers in the Culinary field. This course fulfills SDUHSD Practical Arts credit.

Enrichment:

Sous Chef (SDA)

The purpose of this course is to provide an opportunity for advanced Culinary Arts students to build upon their culinary skills by stepping into a peer mentoring and leadership position in the kitchen. Additionally, students will work closely with the instructor to conduct an in-depth exploration of a culinary topic of interest to them. For example, if you love decorating cakes, want to explore Indian cuisine, or want to become an expert pasta maker, you choose the recipes, practice the skills, perfect the dishes, and watch your skills develop. This is an advanced course in the Culinary Pathway, so students must have completed either of the introductory courses, and International Cuisine to enroll in the course, or by permission of the instructor.

Graphic Design (A Sub Pathway under Arts, Media & Design)

(Arts Media and Entertainment Sector)

Introductory Courses:

Drawing and Design (CCA)

Through this course, students explore, understand, create, evaluate and criticize art. The framework of the course is the visual elements and principles of design, style, evaluation, and criticism. Students research and explore art history from ancient to the present within the individual project context.

***This course is offered at other high school sites as a non CTE VPA pathway course.**

Introduction to Technology (SDA)

Introduction to Technology is designed to introduce the various interrelated aspects of modern technology as they apply to the general academic curriculum. Students will explore fields ranging from Business, Communications, Manufacturing, Drafting, Power, Design and Study Skills. The course rotates students through each area in a series of “mini-courses” that last approximately three weeks. Students are exposed to modern as well as traditional approaches to design, problem solving and production.

Concentration Courses:

Digital Art and Design (DAD) (formerly Imaging) (CCA, LCC, TP)

In Digital Art and Design, students will work both collaboratively and independently to build a foundation on concepts such as the elements of art, principles of design, and photography, while working with industry standard software and tools used to create digital art such as cameras, Adobe Photoshop and Illustrator. General computer experience is recommended, but no prior knowledge of the particular software programs used in the class is required. This is a project based course in which students will be able to develop their skills and succeed by pushing themselves at every step of the design process.

Digital Photo (SDA)

Welcome to the magical world of digital imaging! In this class we create works of art using the tools of digital photography: digital SLR cameras, computers, Adobe Photoshop, and inkjet printers. We will learn how to see and create by studying past

masters of photography and their techniques, by evaluating our own work and the work of our classmates, and by connecting our unique vision to culture and history. We work on project-based, interpretative assignments in a creative environment to refine our own artistic expressions. This class is articulated with Mira Costa College.

Fine Art Digital Photo (CCA, TP)

Fine Art Digital Photo is a digital art class where students will learn to use the digital camera and the computer as a tool for creating art. Students will learn to effectively use digital cameras, exposure control, and digital editing and darkroom techniques with Adobe Photoshop in the service of creative expression and exploration. This will include the study of art theory concepts such as the elements of art, principles of design, composition, lighting, camera handling techniques, history of photography, commercial applications in photography, and photography related careers. Because of the project-based nature of the class, students will be able to learn at their own pace and create meaningful pieces to add to their portfolios. Possible projects include: photography composition techniques, portraiture, before and after editing techniques in Adobe Photoshop, landscape photography, abstract photography and commercial photography including advertising, product, sports, and portrait photography. This course is open to any individual interested in learning Digital Photography and digital editing techniques!

Capstone Course:

Advanced Digital Arts and Design (ADAD) (formerly Advanced Digital Imaging) (CCA, LCC, TP)

Advanced Digital Art and Design should be taken after Digital Art and Design. Advanced Digital Art and Design is geared towards students who are interested in further developing their individual digital art and collaborative design skills. Students will be encouraged to work within the community to solve design problems and to engage in professional practices. In addition, Advanced Digital Art and Design students deepen and refine their skill with computers, cameras, Photoshop, Illustrator, and industry standard technology available to realize their creative vision. This is a project-based class and success is determined by the effort each student is willing to commit to the creative process.

Photo Imaging (CCA, SDA)

Photo Imaging appeals to students who are interested in photography with digital tools (Digital cameras, PhotoShop, Printers) . General computer experience is a prerequisite, but no prior knowledge of the particular software programs used in the class is required. Students will learn and use camera controls (ISO, Shutter Speed, Aperture) as well as editing software. Art Elements and Design will be emphasized in all projects as well as a student's ability to evaluate and reflect on their progress as an artist. Photo Imaging is a project-based class, allowing students at all levels to learn at their own pace and create meaningful pieces to add to their portfolio.

Enrichment:

Advanced Fine Art Digital Photo (CCA)

Advanced Fine Art Digital Photography is designed for students who loved their experience in the beginning Fine Art Digital Photography course and would like to challenge themselves with a more advanced study in the art of digital photography. As with Fine Art Digital Photography, the emphasis is on approaching the world of photography as a means of artistic expression (this is different than "photojournalism" or taking "snapshots.") Students who have nothing to "say" artistically will have a difficult time in this class. In this advanced class, students will be concentrating on producing a "body of photography work" that represents their own artistic vision. Students will receive more advanced instruction into the technical aspects of photography with the goal that the camera will eventually become such a natural tool for them that they can concentrate wholly on the art-making process of photography.

Photo Tech II (SDA)

This course is designed to assist students develop a greater knowledge and expertise in the area of photography. The class is structured for the students to learn independently while exploring advance techniques in photography such as HDR, shooting and processing in RAW, and utilizing the commercial aspect of photography by working with clients to fulfil their specific needs and wants in promoting their businesses. The creative aspect will also be emphasized by allowing the students to choose their own assignments and by learning advanced Photoshop techniques and plugins.

Performing Arts Pathway (Professional Music)

(Arts, Media and Entertainment Sector)

Concentration Courses:

Digital Composition (CCA)

This course is intended to introduce students to MIDI technology and digital music production. Students use industry standard Reason and Sibelius software along with a keyboard control surface to compose and produce original musical work in a variety of styles and idioms. In addition to the use of music technology, this course cover fundamental music theory and composition concepts. This course is designed for students with a deep passion for music, whether or not they have previous music theory or performance experience. While playing an instrument is not required, it is helpful.

Capstone Courses:

Recording Arts (CCA)

This course will teach students the science and mechanics of digital recording in live music applications, signal processing, and audio mixing/mastering skills. Students will be using the industry standard recording software ProTools and will be learning a wide variety of recording techniques. Our recording lab is equipped with industry standard recording hardware, software, microphones, and mobile recording stations. While a musical background is not required for this class, it is helpful. By the end of this course, students will have developed the necessary skills needed to produce professional sounding audio recordings. In addition, we have relationships with industry professionals in the audio field and regularly bring in guest speakers and take field trips to area recording studios.

Enrichment Courses:

Advanced Recording Arts (CCA)

Prior to taking the advanced recording arts class, it is highly recommended to have successfully completed the CTE digital composition and CTE recording arts courses. This course will build on the skills the students learned in these courses and offer lectures and projects based on more advanced audio topics. The Advanced Recording Arts course will cover professional level concepts including: the history of the recording industry and technology; the use of various recording hardware; advanced mixing and editing concepts; advanced mastering, sound reinforcement, music production skills, music business skills; and careers in the recording field. Students have access to industry software (Pro Tools, Reason, Sibelius) as well as hardware and microphones needed to complete professional grade recordings. Students will work on largely self-directed recording and audio production projects designed to mirror professional work in this field.

Rock Band Music Industry (CCA)

This course is designed to help students develop both the business skills and the music/performance skills needed to be successful as a professional in the music industry. Students will learn the essential skills needed to work in a number of sectors of the industry including booking, contracts, publishing and copyright laws, promotions, songwriting, recording and performance skills. They will also receive instruction in music theory, performance skills, and proper rehearsal techniques. At the conclusion of the course, students will turn in a portfolio of work from these areas of study that can be used for placement in internships and employment in the music field.

Performing Arts Pathway (Professional Theatre)

(Arts Media and Entertainment Sector)

Introductory Course:

Introduction to Professional Theater (LCC pilot)

Introduction to Professional theater is the foundation course of the Professional Theater Pathway. Within a collaborative setting, students will study improvisation and theater games, public speaking, acting for theater and film, stage combat, dramatic and sketch comedy writing. This course is designed for all students, ranging from those who have participated in theater previously to those who have never stepped onto the stage. Because actor training is also life training, students will enhance their interpersonal and soft skills while collaborating to create complete productions. This course is conducted in a playful, encouraging, and collaborative atmosphere which facilitates peer bonding and growth in a student's sense of empathy. Students are expected to learn a wide array of theatrical performance and aesthetics concepts which allows them an opportunity to discover a place in theater where they could commit to a study of greater depth. This course is designed for all students, regardless of previous experience.

Concentration Course:

Intermediate Professional Theater (LCC pilot)

Intermediate Professional Theater progresses through theater history in a performance driven, collaborative manner. Students explore a vast breadth of theatrical styles, ranging from the foundation of theater in storytelling and Shakespeare to contemporary theater, musical theater, and film. Based on personal interest, students may narrow their exploration to either musical theater or standard theater. Foundational principles of actor training are combined with advanced techniques such vocal training, character development, and heightened-language text analysis. Students are expected to engage in a greater academic study of theater by exploring various genres. They will discover connections between theater and world history by analyzing how the two influence one another. This course prepares students for college and professional work in theater by teaching them a variety of performance styles.

Capstone Course:

Advanced Professional Theater (LCC pilot)

Advanced Professional theater is the final course in the Professional Theater pathway. This course emphasizes the creative process and creation of original work. Inspired by influential theater troupes, writers, and theorists, students gain college-level understanding of theater craft by writing and performing various theatrical genres. Areas of focus are based on student interest and range from stand up comedy and musical theater to one-person shows and screenwriting. This course includes college and career preparation, such as guest speakers, collaboration with community theater programs and preparation of audition materials. Advanced Professional Theater is designed for students interested in creating original work. Inspired by the work of theater and film's greatest practitioners, students will be challenged to surpass their expectations by bringing their ideas to fruition. Students are expected to complete an original work based on their specific interest. The course culminates in the presentation of each student's project.

Enrichment Courses:

Drama Production (LCC)

This course is designed to provide a deeper understanding of drama through the creative process of theater production and performance. Through active participation in production and performance, students analyze, compare and contrast their work, evaluate the process, and critique their development as an artist.

StageHand Tech (LCC)

This course provides entry level level training in the skills required for technical theater operations. This course will train students in the use and management of the various elements of technical production during a dance, music, or theatrical performance. Students use equipment that includes: light construction hand- and machine tools, painting equipment and supplies, soundboard equipment, electrical lighting equipment and controls, and pulley and rigging equipment. Instruction covers the following areas: safety, theater architecture and stage



equipment, production organization and management, and design theory and practical application in: scenic, props, lighting, sound, and costumes.

Welding and Materials Pathway

(Machining and Forming Technologies)

Introductory Course:

Metals 1 (SDA)

Metals 1 [UC approved G elective] is an introductory course that students can take in both the Engineering and Machining and Forming Technologies pathways. Instruction introduces students to the following areas and machines: precision measurement, introduction to welding, layout, grinding, sawing/cutting, drill press, lathe, vertical mill, plasma cutting, laser cutter, 3D printing, blacksmithing, jewelry making and computer numerically controlled machines. Students will learn to read plans, gain basic computer aided design skills and build several projects in a high tech machine shop.

Concentration Course:

Welding and Metal Fabrication (SDA)

This class is a UC approved G elective and earns Palomar Community College credit. Students will learn all standard welding processes, basic drawing and computer aided design skills, and how to safely operate several machines in the machine shop. Most students will earn one or more welding certifications for free. Welding processes include: oxyacetylene, gas tungsten arc welding, shielded metal arc welding, gas metal arc welding, flux core arc welding, brazing, soldering. Projects may be constructed when basic skills are mastered. Projects range from tiny jewelry creations to large welded projects.

Capstone Course:

Metal Technology 2 (SDA)

Metals Technology 2 [UC approved G elective] is a course specifically designed to further students' knowledge and skills in engineering, machining and welding. When the required projects are complete, students may work in areas of special interest. Students are encouraged to plan and construct a product of their own design. Emphasis is on expanded knowledge and production techniques within the basic areas of metal work on an individual basis. Larger group projects such as building a hovercraft may also be available.

Software & Systems Development Pathway

(Information and Communication Technologies Sector)

Introductory Courses:

Exploring Computer Science (CCA, LCC, SDA, TP): This course will provide students with foundational knowledge of computer science. Students will explore topics in Computing Systems, Networks and Internet, Data and Analysis, Algorithms and Programming, and Impacts of Computing. Throughout the course students will understand algorithm development related to computer applications and gain technical expertise using computational tools.

Computer Game Design (CCA, SDA): This course provides entry level and upgrade training in the principles of computer game design, programming, and business/industry awareness. Instruction integrates technical skills with Arts, Media, and Entertainment skills and the project management of the industry. Class activities involve team and individual projects in programming, animation, design and other media utilized in the production of computer games. Students utilize industry-based game design software.



Concentrator Courses:

AP Computer Science Principles (CCA, LCC, SDA, TP): AP Computer Science Principles offers a multidisciplinary approach to teaching the underlying principles of computation. The course will introduce students to the creative aspects of programming, abstractions, algorithms, large data sets, the Internet, cybersecurity concerns, and computing impacts. AP Computer Science Principles also gives students the opportunity to use current technologies to create computational artifacts for both self-expression and problem solving. Together, these aspects of the course make up a rigorous and rich curriculum that aims to broaden participation in computer science.

Capstone Course:

AP Computer Science A (CCA, LCC, SDA, TP): AP Computer Science A is equivalent to a first-semester, college-level course in computer science. The course introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design using Java language. These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems. The AP Computer Science A course curriculum is compatible with many CS1 courses in colleges and universities.

Enrichment Courses:

Computer Game Design (TP): This course provides entry level and upgrade training in the principles of computer game design, programming, and business/industry awareness. Instruction integrates technical skills with Arts, Media, and Entertainment skills and the project management of the industry. Class activities involve team and individual projects in programming, animation, design and other media utilized in the production of computer games. Students utilize industry-based game design software.

Computer Programming (TP):

This course provides an introduction to the core principles of computer programming. Students will learn basic data structures such as variables, loops, and arrays, as well as the essential concepts and algorithms behind intermediate-level coding. Students will then build on this foundation of basic principles to complete a variety of project-based learning exercises, including gaming, web design, or desktop and mobile application development projects.

Systems, Diagnostics and Service Repair Pathway

(Transportation Sector)

Introductory Courses:

Introduction to Technology (SDA)

Introduction to Technology is designed to introduce the various interrelated aspects of modern technology as they apply to the general academic curriculum. Students will explore fields ranging from Business, Communications, Manufacturing, Drafting, Power, Design and Study Skills. The course rotates students through each area in a series of “mini-courses” that last approximately three weeks. Students are exposed to modern as well as traditional approaches to design, problem solving and production.

Concentrator Course:

Auto Tech (SDA,TP)

Auto Technology is designed as a basic course in automotive service, maintenance and repair. It is also a pre-vocational class for those interested in a career in mechanical fields. The course content includes automotive safety, tools of the trade, automotive maintenance, minor service techniques including checking of fluids, lubrication, battery service, cooling system service, wheel, tire & suspension service, brake service, and performance of a minor electrical tune-up. Hands-on experience with tools, lifting equipment, service equipment, test equipment, and automotive components is included. It is helpful to have a valid California driver's license and access to a car on a daily basis for live work and there are also demo vehicles in the shop. Upon completion, students will be eligible for up to 2 units of college credit at MiraCosta Community College.



Capstone Course:

Auto Engine Performance (SDA,TP)

This course provides entry-level and upgrade training in automotive, truck, and off-road tune-ups. The course will cover the following areas of instruction: engine analysis, fuel, electrical, ignition and emission control systems, diagnosis, repairs, service, and customer relations. Also can be taken for accelerated placement/college credit up to 4 units at MiraCosta College by examination.