



CAREER TECHNICAL EDUCATION—CTE

A program of study that involves a multiyear sequence of courses that integrates academic core knowledge with technical and occupational knowledge to provide students with a pathway to postsecondary education and careers.

<http://www.cde.ca.gov/ci/ct>

What is Career Technical Education?

The VHS Career Technical Education (CTE) program is designed to provide all students with opportunities for enhanced learning experiences, preparation for future career decisions and a realistic view of the world of work.

Elective CTE Courses provide students with the academic knowledge and skills needed to prepare for post-secondary education. Many of the CTE courses are articulated with Palomar College and offer students an opportunity to earn college credit. Students also receive a strong work-based learning experience and understanding of all aspects of the industry they are considering for a future career. The competency based applied learning methodology featured in CTE courses contributes to the academic knowledge, problem solving abilities, work attitudes, technical expertise and future employability.

NOTE: Since a 2-year sequence is needed to complete the pathway options, 11th grade will be the last opportunity that anyone may have to go into the first class of a sequence.

CTE ARTS, MEDIA & ENTERTAINMENT INDUSTRY SECTOR

Photography

Recommended Sequence of courses:

- Photography I
- Photography 2

R160 Photography 1— (9-11)

- *Meets UC/CSU “f” fine art credit*
- *Palomar College GCIP 150, Digital Photo I articulation credit*

Photo Imaging I is an introductory course designed to instruct students in the fundamental skills of composing digital photo images and processing them using industry standard software. Basic and intermediate techniques are taught to enhance or manipulate images for any purpose. With hands on experience, students become familiar with photographic imaging equipment, materials, methods, and processes.

Applied creative thinking and visual problem solving prepares students for more advanced courses and a foundation for professional career possibilities. This course is recommended prior to enrollment in advanced courses in the CTE Visual Arts Pathway.

R162 Photography 2 (10-12)

- *Successful completion of Photography 1*
- *non college prep elective*

This is a studio course designed for students who wish advanced training or to pursue a career in photography. Advanced concepts, techniques, practices, aesthetics and photographic imaging and image-making with digital technology are included in instruction, with an emphasis on portfolio building.

CTE ENGINEERING AND ARCHITECTURE INDUSTRY

SECTOR

Pre Engineering & Design

Recommended Sequence of classes:

- Pre Engineering & Design I
- Pre Engineering & Design 2

R156 Pre-Engineering & Design I (9-11)

- *Meets UC/CSU "g" elective credit*
- *Palomar College Credit Pending*

This year-long class focuses on mechanical design. Technical drawing and 3D visualization skills are developed which enable students to use cutting edge computer aided design software: "SolidWorks". This program is used by industry professionals to design a wide range of products ranging from the music industry to military and defense. Students learn industry standards and computer skills that will enable them to design their own skateboards, surfboards, or other products.

R154 Pre-Engineering & Design 2 (10-12)

- *Prerequisite: requires "C" or better in Pre-Engineering & Design I*
- *Meets UC/CSU "g" elective credit*

Students who prefer working with the program "SolidWorks" as a result of their first year in pre-engineering design continue to explore of the industry as they apply science & math concepts along with problem

solving skills while learning about the fundamentals of engineering and material science. These concepts are implemented through individualized design projects. Students gain experience designing, prototyping, analyzing and improving existing designs while using “SolidWorks”.

CTE INFORMATION & COMMUNICATION

TECHNOLOGIES INDUSTRY SECTOR

Games and Simulations

Recommended Sequence of classes:

- Games and Simulation 1
- Games and Simulation 2

X 730- GAMES and SIMULATION 1 (9-11)

This course allows students to work in teams to develop games or simulations. Students will learn skills such as storyboarding, plot, flow and using functions. Learning how to implement standards games/simulations strategy and rules of play as well as integrating mixed media appropriate to the game design/simulation will be included. Other topics include design specifications, delivery, rules of play, navigation functionality, scoring, and other special features.

X 735- GAMES and SIMULATION 2 (10-12)

This course allows students to learn and display mastery of advances game design/simulation skills in projects they design individually or in teams. Advanced skills include applying programming skills for rendering single player or multiuser games or simulations projects, program control, branching, memory management, strategies, and implementation. Using Artificial Intelligence techniques such as finite state machines in non-player characters could be included.

CTE AGRICULTURE & NATURAL RESOURCES INDUSTRY

SECTOR

Animal Science Pathway

Recommended Sequence of classes:

Ag Biology
Veterinary Science

Agriscience Pathway

Recommended Sequence of classes:

Chemistry and Agriscience
Sustainable Agriculture

S400/S405 Introduction to Agriculture, Introduction to Agriculture (SEI) (9-12)

- *Minimum of 2.00 GPA required*
- *Meets VUSD high school life science requirement.*
- *Fulfills UC/CSU "g" academic elective requirement*

This is the first course in a two-year sequence. It explores the agricultural sciences including animals, plants, crops, and leadership development through the Future Farmers of America (FFA). This course is designed to introduce students to the life sciences at a conceptual level utilizing a hands-on approach and emphasizing the scientific method. Core literature, research and formal writing assignments will be required. Participation in FFA (Future Farmers of America) activities and SAE is recommended.

S450 Agricultural Biology (9-11)

- *Required: Completion or concurrent enrollment in Int Math 1, and*
- *Minimum 2.00 GPA.*
- *Students should not enroll in both Lab Biology and Ag Biology.*
- *Earns UC/CSU "d" lab science requirement*

This is a one-year life science lab science course for the college bound student with an interest in agriculture which emphasizes principles, central concepts and inter-relationships in the scientific method, molecular and cellular aspects of life, chemical and structural basis of life, growth and reproduction of plants and animals, evolution, genetics, taxonomy, nutrition, health and diseases of plant and domestic animals.

S409 Chemistry & Agriscience (10-11)

- *Prerequisites: successful completion of one year of Ag Biology or Intro to Agriculture*
- *Minimum 2.00 GPA*
- *Completion of or concurrent enrollment in Int. Math 1.*
- *Meets UC/CSU "d" lab science*

This course explores the physical and chemical nature of soil as well as the relationships between soil, plants, animals and agricultural practices. Students will examine properties of soil and land and their connections to plant and animal production through project based learning. Using knowledge of scientific protocols as well as course content, students will develop an Agriscience research program. Participation in intracurricular FFA activities as well as the development and maintenance of an ongoing Supervised Agricultural Experience (SAE) program are required.

X739 Sustainable Agriculture (11-12)

- *Prerequisites: successful completion of one year of Ag Biology or Intro to Agriculture*
- *Minimum 2.00 GPA*

This project-based capstone integrated class combines an interdisciplinary approach to laboratory science and research with agricultural management principles. Using skills and principles learned in the course, students design systems and experiments to solve agricultural management issues currently facing the industry.

S415 Veterinary Science (10-12)

- *Pre-requisites: completion of one year of Agriculture or teacher recommendation and*
- *Minimum GPA of 2.00.*
- *Meets UC/CSU “g” academic elective credit*

This life science course includes career exploration in the field of veterinary medicine, concentrating on anatomy and physiology, nutrition, breeding, health care, disease prevention and management systems of domestic animals and livestock. Veterinary health practices, office procedures, and record keeping will also be covered. Core literature, research and formal writing assignments will be required. Participation in FFA (Future Farmers of America) activities and SAE (Supervised Agricultural Experience) projects are also required.

S420 Horticulture (9-12) (Elective – not Science credit)

- *Prerequisites: completion of one year of Agriculture or teacher recommendation, and*
- *minimum GPA of 2.00.*
- *Non-college prep elective*

Students will be trained in the propagation, culture, processing and marketing of ornamental plants and the design, use and maintenance of greenhouses and shade houses. Students will also learn landscape and hardscape design, maintenance and the proper use, care and identification of equipment and supplies. Participation in FFA (Future Farmers of America) and SAE (Supervised Agricultural Experience) projects are also required.

CTE TRANSPORTATION INDUSTRY SECTOR

Systems Diagnostics, Service, and Repair

Recommended Sequence of classes:

- Auto Technician I
- Auto Technician 2

R100 Auto Technician 1 (10-11)

- *Non college prep elective*

The Automotive Technician sequence of courses provides training in the operation, diagnosis and repair of the internal combustion engine. Information covered includes fuel delivery system, ignition system, coolant system, and lubrication system along with the disassembly and assembly of the individual systems and engine components. Great emphasis is placed on completing NATEF tasks. The course also provides training in the operation of manual and automatic transmissions. The class provides hands-on repair of brakes systems (disc brakes and drum brakes), suspensions, rear axles and final drives. Employment possibilities include entry-level positions in all phases of automotive repair.

R110 Auto Technician 2 (11-12)

- *Non college prep elective*

Students will demonstrate competency in the skills and knowledge acquired in introductory and concentration levels courses. Students will participate in work-based learning opportunities which can lead to internships. Students that successfully complete the course of study will qualify for industry recognized certifications. Upon completion of this course, students will be prepared for an entry level position at a vehicle repair facility.

CTE HEALTH SCIENCE & MEDICAL TECHNOLOGY

INDUSTRY SECTOR

The recommended sequence of classes is:

- Patient Care 1
- Patient Care 2

X 736 - Patient Care 1—(9-11)

- *Pending UC/CSU “g” academic elective credit*

This course provides an introduction to the high school medical pathway courses. Instruction covers content addressing: Careers and Personal Qualities of a Health Care Worker, Legal and Ethical Responsibilities, Introductions to Medical Terminology, with an **emphasis** on Anatomy & Physiology, Understanding Diversity and Communications in Health Care, Nutrition, and Computers in Health Care, Safety Precautions, Infection Control, and Mathematics in Health Care, Physical Assessment, and Basic Principles of First Aid & CPR. This course includes both theory and practical instruction. Students will also be introduced to various employment opportunities within the health industry. Approximately 180 hours are needed to complete this course.

X738 - Patient Care 2 (10-12)

- *Pending UC “g” approval*
- *Completion of Patient Care 1 required*

This capstone course prepares students within a specific career in the various areas of patient care which will allow them to be prepared to enter into postsecondary education or training programs in the selected Patient Care Pathway.

CTE HOSPITALITY, TOURISM & RECREATION

INDUSTRY SECTOR

The National Restaurant Association in response to a critical shortage of trained restaurant managers, chefs, servers, and other personnel founded an educational program titled “ProStart”. This program is designed ,

to stimulate interest in high school students and offer a career building 2-year Culinary Arts and Food Service Management program.

The recommended sequence of classes is:

- Culinary Arts 1
- Culinary Arts 2
- Baking and Pastry

R308 Culinary Arts 1 (10-11)

- *Prerequisite: successful Completion or concurrent enrollment in Integrated Math 1*
- *Meets UC/CSU “g” academic elective credit, It does **NOT** fulfill an “f” credit.*
- *Examination required to obtain articulation credit from Grossmont Community College*

This sequence of Culinary Art classes trains students to provide professional chef and related cooking services in restaurants and commercial food establishments. It includes instruction in recipe and menu planning, preparing and cooking of foods, supervising and training kitchen assistants, the management of food supplies and kitchen resources, and mastery of a wide variety of cuisines and culinary techniques. Students will receive real world work experience at the Panther Café at Vista High School.

The “ProStart” Culinary Arts program provides classroom study, mentored work experiences and local and national competitions.

R309 Culinary Arts 2 (11-12)

- *Prerequisite: successful completion of Culinary Arts1 or teacher approval*
- *Meets UC/CSU “g” academic elective credit, It does **NOT** fulfill an “f” credit.*
- *Examination required to obtain articulation credit from Grossmont Community College*

In Advanced Culinary Arts, students will further their culinary skills and knowledge using the National Restaurant Association Educational Foundation’s ProStart curriculum that teaches management and culinary skills needed for a career in the restaurant and food service industry. Students study in the classroom, participate in mentored work experience at local eateries and restaurants, and test their skills in local national competitions. Students will gain hands on experience through Vista High School’s own Panther Café in addition to mentorship opportunities in local culinary businesses.

X725 - Baking and Pastry (11-12)

- *Prerequisite: completion of Culinary Arts 1*

Baking and Pastry is designed as a capstone course for students who have successfully completed Culinary Arts 1. The course is a part of a sequence of courses that successfully prepares students for a career in the Foodservice and Hospitality industry with a concentrated focus designed to explore the specialized field of baking and pastry.



Mascot:

Panther

Principal:

Mr. Anthony Barela

Colors:

Red, Black and White

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