

Clovis Unified School District

COLLEGE AND CAREER READINESS

Pathways and Course Descriptions:

*A Reference Guide for Students, Parents,
Counselors, and Administrators*

2023-2024



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District Wide Expected Results for Students

Career Ready

- **Career Plan**
- **Portfolio Development**
- **Professionalism**

Technically Skilled

- **Industry Safety Standards**
- **Industry Competencies**
- **Industry Technology**
- **Industry Certificates**

Educationally Prepared

- **Integrated Academics**
- **Post-Secondary Opportunities**
- **Productive Citizens**



Terms, Definitions and Acronyms

CTE: Career Technical Education

CTSO: Career and Technical Student Organization. These include integrated student leadership co-curricular organizations. There are several recognized in California including DECA, FBLA, FFA, HOSA, and Skills USA. Within Clovis Unified FBLA, FFA, HOSA, and Skills USA are represented.

FBLA (Future Business Leaders of America) is the high school division of Future Business Leaders of America-Phi Beta Lambda, Inc. FBLA helps high school students prepare for careers in business.

FFA (Future Farmers of America) is the student leadership organization associated with the Agriculture pathways.

HOSA (Future Health Professionals), formerly known as Health Occupations Students of America (HOSA), is an international career and technical student organization

SkillsUSA is a national nonprofit organization serving middle school, high school, and college students who are preparing for careers in trade, technical and skilled service occupations.

Pathway: A sequence of linked courses that lead to industry recognized skillsets.

Introductory Course: An initial or survey course in CTE program intended to provide a beginning or introductory level of information about an *industry sector or career pathway*. The first course in a CTE *course sequence*.

Concentrator Course: A CTE course beyond the introductory level that is intended to provide more in-depth instruction in and exploration of a specific *industry sector*. The second course and succeeding courses of a planned CTE program sequence.

Capstone Course: The final course in a planned sequence of courses for a CTE program that provides a rigorous and intensive culmination of a course of study. Capstone courses are typically offered through Regional Occupational Centers and Programs (ROCP's).

Work-based Learning: (WBL) can refer to career search, a job shadow, unpaid internship, community classroom to paid internships and work experience.

Job Shadow: Students only observe and interview industry site professionals.

Community Classroom: A unpaid internship or contract where students placed and mentored by an industry site professional within a community work-based site.

Internship: A paid or unpaid supervised training experience through a Career Technical Education course.

COLLEGE AND CAREER READINESS

Vision

To strive to be America's leader in exemplary College and Career Readiness.

Mission

Clovis Unified School District will provide innovative College and Career Readiness through high quality, rigorous educational pathways developed in partnership with business and industry allowing students to pursue their passions while becoming college and career ready.

College and Career Readiness provides students of all ages with the academic and technical skills; knowledge and training necessary to succeed in future careers and to become lifelong learners. A program of study which involves a multiyear sequence of courses that integrates core academic knowledge with technical and occupational knowledge to provide students with a pathway to postsecondary education and careers.

CTE 15 Industry Sectors



Agriculture &
Natural Resources



Building Trades and
Construction



Arts, Media, and
Entertainment



Education, Child
Development,
and Family Services



Energy and Utilities



Engineering &
Design Industry



Fashion & Interior Design



Finance and Business



Health Science &
Medical Technology



Hospitality, Tourism, &
Recreation



Information Technology



Manufacturing &
Product Development



Marketing, Sales, &
Service



Public Services



Transportation

High School Career Technical Education At-A-Glance

Clovis Unified School District Career Technical Education (CTE) offers classroom and work-based learning to high school students.

Career Technical Education offers training in more than 70 courses based upon current and future labor market demands. Programs focus on those career sectors where there is proven local industry demand and sufficient student interest and need.

Who Can Enroll?

Career Technical Education offerings are expanding to include more opportunities for students in grades 10-12. Many of the classes have prerequisites. Please contact the Counseling Center to determine eligibility.



Why take a Career Technical Education Course?

Career Technical Education courses are sequenced to create pathways for students in a program of study. The courses can lead to post-secondary education and/or employment opportunities.

How are Career Technical Education courses unique?

Career Technical Education courses combine in-class, community classroom, and work-based learning experiences. The courses are taught by highly qualified professionals whose focus is on the application of industry standards integrated with academic rigor and safety protocols.

Is college credit available?

Career Technical Education offers courses articulated with the local community colleges and universities. (Butte College, Clovis Community College, Fresno City College, Reedley College, and California State University Fresno)

BUCHANAN HIGH SCHOOL
Pathways

DESIGN, VISUAL and MEDIA ARTS		
Year in School	Pathway Course	Description
10	Introduction to Digital Photography (P) (Unitrack MCJ 17)	This is an introduction course to digital photography. Topics include digital camera operations, lighting technique, aesthetics, Photoshop, Light-room, and portfolio development. Students will explore exposure systems using aperture, shutter speed, and ISO combinations. Prerequisite: None.
11-12	Digital Photo II	This course has an emphasis in Adobe Photoshop in association with Digital Photography. The focus of this course is in using Photoshop and developing relationships with clients. Prerequisite: Introduction to Digital Photography with a C grade or better.
11-12	* ROP Digital Photography (P)	Students will develop a portfolio of artistic endeavors along with creating work in cooperation with an individual to produce commercial photography. Students will learn about digital photography, postproduction editing software, and client relationships. Prerequisite: None.
12	* ROP Publishing Management w/English 12 (P) (Unitrack MCJ 2)	Through this course, students will demonstrate advanced skills in writing and managing a publication. Newspaper, magazine, and anthology styles of journalistic writing and graphic design are integrated to produce student publications. Prerequisite: 10 th grade English and permission of instructor.
11-12	* ROP Journalism & Publishing w/English 11 or 12 (P) (Unitrack MCJ 2)	Through this course, students demonstrate their skills in the art of writing and production. All forms of journalistic writing and layout design are covered to produce student publications. A major project for the students is to design, publish, and market the Buchanan High School yearbook. Prerequisite: Teacher approval.
CHILD DEVELOPMENT		
Year in School	Pathway Course	Description
10	Exploration of Child and Adolescent Literature (HP)	Exploration of Child and Adolescent Literature is a grade 10 English Language Arts college preparatory course integrated with the Education Pathway standards. This course allows students to utilize Language Arts skills to investigate and evaluate the value and purpose of world literature for children and adolescents. Students synthesize knowledge of the developmental stages of physical, intellectual, social, and emotional development with an understanding of appropriate teaching materials and readings for each of the stages. Prerequisite: A 2.50 grade point average or higher, or recommendation by Education Pathway instructor.
11-12	* ROP Careers in Child Development Dual Enrollment (Child Dev 1 Clovis Community College)	Studies include the preparation to work in fields dealing with young children and developmental stages of children before birth to age 12. Students gain firsthand experience through classroom and worksite learning, job shadowing, and tours that enable them to determine the benefits of an education-related career. Prerequisite: Excellent attendance and citizenship. (Students travel to Clovis North for this class).
EDUCATION		
11	Contemporary Issues in Education (HP)	Contemporary Issues in Education is a college preparatory grade 11 English course integrated with the Education Pathway standards of the Education, Child Development, and Family Services sector which allows students to see where the skills of English intersect with the elements of education. Students conduct research, closely read, and analyze complex texts, evaluate instructional methodology and philosophy, and create a portfolio of reflections, activities, and compositions that, when synthesized, serve as the foundation for three capstone projects. Prerequisite: A 2.50 grade point average or higher.

11-12	* ROP Careers in Education w/ English 11 or 12 (P) Dual Enrollment (Education 10 Clovis Community College)	Studies include the nature and scope of the school system, the duties and opportunities of the professional teacher, factors relative to success in teaching, and credentialing requirements. Prerequisite: Grade of “C” or better in English 10, and English 11. Excellent attendance and behavior records in previous grade levels required.
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ENGINEERING DESIGN

Year in School	Pathway Course	Description
9-12	Introduction to Design 1,2 (P) (PLTW)	Introduction to Design (ID) is a high school level foundational course in the Project Lead The Way, (PLTW,) Engineering Program. In ID, students are introduced to the engineering profession and engineering design process. Prerequisite: Concurrent enrollment in Math 1.
10-12	Honors Principles of Engineering (HP)	Principles of Engineering (POE) is a foundation course of the high school engineering pathway. This survey course exposes students to some of the major concepts that they will encounter in a postsecondary engineering course of study. Through problems that engage and challenge, students explore a broad range of engineering topics, including mechanisms, the strength of materials and structures, automation, and kinematics. Prerequisite: Concurrent enrollment in Math 3. Grade of B or higher in Math 2.
11-12	Honors Engineering Design & Development (PLTW) (HP)	Engineering Design and Development (EDD) is the capstone course in the PLTW high school engineering program. It is an open-ended engineering research course in which students work in teams to design and develop an original solution to a well-defined and justified open-ended problem by applying an engineering design process. Prerequisite: Concurrent enrollment in AM (Required); Computer Integrated Manufacturing (Recommended).

ENVIRONMENTAL RESOURCES

Year in School	Pathway Course	Description
10-11	Chemistry/ Environmental Engineering – Water (P)	Studies include the resolution to environmental engineering problems related to water and its interactions with the environment. Students will use a systems-based approach to understand that all environmental systems consist of matter and will apply this knowledge to solving current and future global water issues. Prerequisite: Math 1.
10-12	Honors Environmental Sustainability (HP)	Honors Environmental Sustainability (ES) is a high school-level specialization course in PLTW Engineering. In Honors ES, students investigate and design solutions to solve real-world challenges related to clean drinking water, a stable food supply, and renewable energy. Students are introduced to environmental issues and use the engineering design process to research and design potential solutions. Prerequisite: Biology or Biological Links to Energy & Environment, and Math 1.
10-12	AP Environmental Science	This class prepares students to pass the national exam for AP Environmental Science for college placement and/or credit. Topics include energy flow, cycling of matter, geological activities, atmosphere chemistry, and other relevant topics. This is a rigorous science course that stresses scientific principles, concepts, and theories required to understand the interrelationships of the natural world. Prerequisite: Biology, or AP Biology, Chemistry, AP Chemistry, Math 1, and Math 2.

FOOD SERVICE and HOSPITALITY

Year in School	Pathway Course	Description
9-12	Food Science and Nutrition (P)	Studies include an introduction to basic terms, safety, recipes, measurement, and nutrition. Areas of emphasis include fruits and vegetables, milk and dairy products, breads, desserts, and meat preparation. Prerequisite: None.

11-12	* ROP Culinary Arts and Hospitality Management (P)	In this course, students will expand their study of Culinary Arts and explore Hospitality Management. Students will learn and apply knowledge through standards and project-based curriculum, both in the lab/class setting and in a working food service kitchen. Prerequisite: Food Science and Nutrition (P), ROP Culinary Arts.
11-12	* ROP Culinary Arts (P)	Studies include the exploration of the food industry that employs over 20 million people. Recipe development, meal planning and preparation, culinary fundamentals, ingredients, nutrition, and presentation are explored. Prerequisite: Food Science and Nutrition.

PATIENT CARE

Year in School	Pathway Course	Description
10-12	Medical Health Careers (P)	This course is designed to allow students to explore careers in the medical health career arena with a focus on knowledge and skills required for entry-level employment. Students are introduced to health care with an emphasis on core skills and knowledge applicable to a variety of the health professions. Prerequisite: Completion of Biology with a "C" grade or higher or concurrent enrollment in Biology.
11-12	* ROP Sports Medicine/Fitness (P) <i>Unitracked</i> <i>Kinesiology 38</i>	This course will allow students to gain practical experience learning to work in physical therapy, fitness, and athletic training settings. The course empowers the student with the healing and conditioning process resulting from methods used in physical therapy and physical conditioning of the human body. Prerequisite: Completion of Biology with a grade of "C" or higher.

PERFORMING ARTS

Year in School	Pathway Course	Description
10-11	Drama 2 Technical Theater (P)	The student will study and apply the principles of group dynamics and collaboration during the pre-production through postproduction process of Theatrical Production. This course provides instruction in the implementation of theatrical designs for sets, lights, sound, properties, costumes, and makeup. Prerequisite: Drama 1 with "B" or higher, or permission of instructor.
11-12	Advanced Technical Theater	This advanced technical theater arts course is designed to build upon skills learned in Drama 2 Technical Theater for students interested in becoming designers and leaders in the Technical Theater Arts world. Prerequisite: Drama 2 Technical Theater.

PRODUCTION and MANAGERIAL ARTS

Year in School	Pathway Course	Description
9-10	Videography 1AB (P)	Videography 1 is an introduction course that emphasizes and develops critical thinking skills by exploring the influence of design principles, historically significant art forms from various genres, and the production process of films and television programming. Prerequisite: Good citizenship and attendance.
10-12	Digital Film Making (P)	Studies include the artistry and technical elements of filmmaking. Students will be introduced to the theory of films and filmmaking and be expected, in writing, to analyze, describe and breakdown the elements of shot, a scene, and sequence. Prerequisite: Recommended Videography 1.
11-12	* ROP Multimedia Communication (P) <i>Unitracked</i> <i>MCJ 15</i> (Even Years)	Students learn to use innovative technology and software, incorporate principles of design, and blend computer graphics into all elements of production. Prerequisite: None.

11-12	* ROP Videography (P) Unitrack MCJ 15 (Odd Years)	Students create, write, and produce a wide variety of video projects that highlight Buchanan High School students and faculty. Students use innovative technology and software, incorporate principles in design, and blend computer graphics into all elements of production. This is a college prep course for Visual and Performing Arts. Prerequisite: None.

CLOVIS EAST HIGH SCHOOL

Pathways

AGRICULTURAL MECHANICS		
Year in School	Pathway Course	Description
9-12	Ag Engineering I Dual Enrollment (Intro to Ag Welding MAG 40 Reedley College)	Studies include the introduction of the Ag mechanics and engineering industry in the areas of welding, woodworking, electrical wiring, plumbing, and other related fields. Prerequisite: None.
10-12	Ag Engineering II (P) Dual Enrollment (Intro to Ag Welding MAG 41 Reedley College)	Studies include a continuation of Ag Mechanics I, computer-aided drafting, plasma arc cutting, fabrication techniques, and project design. Prerequisite: Ag Engineering I with a “C” grade or higher.
11-12	Ag Engineering III Dual Enrollment (Agricultural Welding Fabrication MAG 44 Reedley College)	Studies include advanced welding procedures, electrical wiring principles, budgets, and building projects. Prerequisite: Ag Engineering II or ROP Welding Processes and Fabrication with a “C” grade or higher.
11-12	* ROP Welding Processes and Fabrication Dual Enrollment (Credit by Exam Butte College)	Welding Processes and Fabrication is a skill-building course that emphasizes welding and fabrication skills, including non-ferrous metals, in the advanced phases of Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Gas Tungsten Arc Welding (GTAW). The primary emphasis is on using equipment in all positions of welding with the application of welding skills learned through project fabrication, repair, and industry procedure. Prerequisite: Ag Engineering III is recommended, or Teacher Recommendation.
11-12	* ROP Welding Fabrication and Application Dual Enrollment (Credit by Exam Butte College)	Welding Fabrication and Application is a capstone course designed to train students for entry-level welding/metal fabrication positions. This course prepares students for post-secondary agricultural mechanics, welding technology, and industrial technology educational programs. This full-year course emphasizes welding and fabrication skills in the advanced phases of Oxyacetylene, SMAW (Arc Welding), GMAW (MIG Welding), and TIG welding. This course applies the practical knowledge and skills learned during the previous years of instruction. Prerequisite: Ag Engineering III or Welding Processes and Fabrication recommended, or Teacher Recommendation. Transportation is highly recommended.
AGRICULTURAL SCIENCE		
Year in School	Pathway Course	Description
9-10	Biology & Sustainable Ag (P)	Studies include plant and animal life, their relationship to one another, and to humans in their environment. Using agriculture as the model, this class takes biology to the applied level. Prerequisite: None.
10-11	Chemistry and Agriscience (P) Dual Enrollment	Studies include the exploration of the physical and chemical nature of soil as well as the relationships between soil, plants, animals, and agricultural practices. This course follows California Academic Standards NGSS for chemistry as well as Foundation Standards for Agriculture.

	(Soils Science (PLS 2) Reedley Collee)	Prerequisite: Math 2 or concurrently enrolled, and Ag Biology, Biology, or Honors Biology with a “C” grade or higher.
11-12	Food Science (P)	Studies include the application of fundamental scientific principles to the research, development, manufacturing, packaging, storage, and marketing of food products. Prerequisite: Math 1; Ag Biology, Biology, or Honors Biology with a “C” grade or higher; and a “C” grade or higher in any previous agricultural class at Clovis East.
11-12	Adv. Interdisciplinary Science for Sustainable Agriculture (HP)	Studies include design systems and experiments to solve agricultural management issues currently facing the industry. Prerequisite: Grade of “C” or higher in life science and physical science.

ANIMAL SCIENCE

Year in School	Pathway Course	Description
9-10	Agricultural Science 1	This course is designed for students interested in the field of agriculture. Topics covered include animal science, plant science, ornamental horticulture, public speaking, record keeping, parliamentary procedures, agricultural organization, and judging competitions. This course fulfills the CUSD graduation requirement for life science. Prerequisite: None.
10-12	CDE Animal Science (P) Dual Enrollment (Intro to Animal Science (AS 1) Reedley College)	Studies include the principles of animal science focusing on areas of livestock production, anatomy, physiology, reproduction, nutrition, respiration, and genetics. Prerequisite: Math 1, and Ag Biology, Biology, or Honors Biology with a “C” grade or higher.
10-12	Equine Anatomy & Physiology Science	This course is designed to give the student an in-depth introduction to the field of animal health care of equine science. The student will complete a curriculum that covers breeds, anatomy, nutrition and feeding, conformation faults, diseases, reproduction, behavior, facilities and stable practices, careers, business management, FFA leadership, and a supervised agricultural experience program. Prerequisite: Ag Biology, Biology, or Honors Biology with a “C” grade or higher.
11 - 12	* ROP Equine Science Dual Enrollment (Equine Science (AS 21 Reedley College)	This course is designed to give the student an in-depth introduction to the field of animal health care and equine science. The student will complete a curriculum that covers breeds, anatomy, nutrition and feeding, conformation faults, diseases, preproduction, behavior, buildings, and stable practices. Prerequisite: Ag Biology, Biology, or Honors Biology with a “C” grade or higher. Transportation is required.
11-12	* ROP Veterinary Science (P)	This course provides a survey of veterinary and animal-related careers and teaches the foundation for an entry-level job in veterinary assisting or supports further veterinary medical training. Major topics include Animal breeds, veterinary equipment, parasites, anatomy and physiology, medical terminology, and management of both companion and livestock species. Hands-on training in animal restraints and clinical procedures is included. Prerequisite: Ag Biology, Biology, or Honors Biology with a “C” grade or higher. Transportation is required.

PLANT and SOIL SCIENCE

Year in School	Pathway Course	Description
9-12	Art and History of Floral Design (P) Dual Enrollment (Beginning Floral Design (EH 37) Reedley College)	Studies include the application and artistic approach to floral design. This class involves the fundamentals of floral design theory, techniques, and skills currently practiced in the floral design industry. Prerequisite: None.
10-12	Ornamental Horticulture	This project-based course offers hands-on experience in many areas of plant science. Students learn basic horticultural plant structures and functions, propagation methods, growing media and fertilizers, landscaping, and pruning. Students gain an understanding of plant classification, anatomy, production and utilization, the study of plant diseases, their causes, nature, and control. Units in this course will also cover turf grass management, landscape design, and irrigation systems. Prerequisite: Ag Biology, Biology, or Honors Biology with a “C” grade or higher.
10-12	Plant Production Management (P)	This course encompasses learning the farming practices of row crops, orchard production, vineyard production, safe transport methods, quality control, and fresh fruit grading/evaluations. At the conclusion of the year, students will have an opportunity to market and sell the produce/ projects at the McFarlane-Coffman Agriculture Center. Prerequisite: Grade of “C” or higher in life science and physical science.

11-12	Farm to Table (P)	This course will teach students to integrate sustainable agricultural practices of farmers who grow our food and the people who prepare and consume it. Prerequisite: Math 2 or concurrently enrolled; Ag Biology, Biology, or Honors Biology with a “C” grade or higher; and a “C” grade or higher in any previous agricultural class at Clovis East.
11-12	Advanced Floral Design (P)	This course will build upon the prerequisite course, The Art and History of Floral Design. Advanced Floral Design will increase the focus on the art design, handling of cut flowers, the mechanics of floral design, and the effects of retail in the floral industry. Students will learn about building and designing displays, advertising, marketing, pricing, and sales. Students will also develop floral design skills for use in industries such as weddings, sympathy, and event floral work. Prerequisite: Grade of “C” or higher in Art and History of Floral Design.

CHILD DEVELOPMENT

Year in School	Pathway Course	Description
10	Exploration of Child and Adolescent Literature (HP)	Exploration of Child and Adolescent Literature is a grade 10 English Language Arts college preparatory course integrated with the Education Pathway standards. This course allows students to utilize Language Arts skills to investigate and evaluate the value and purpose of world literature for children and adolescents. Students synthesize knowledge of the developmental stages of physical, intellectual, social, and emotional development with an understanding of appropriate teaching materials and readings for each of the stages. Prerequisite: A 2.50 grade point average or higher.
11-12	* ROP Careers in Child Development Dual Enrollment (Child Ed 1 Clovis Community College)	Studies include the preparation to work in fields dealing with young children and the developmental stages of children before birth to age 12. Students gain firsthand experience through classroom and worksite learning, job shadowing, and tours that enable them to determine the benefits of an education-related career. Prerequisite: 2.5+ GPA, excellent attendance and citizenship, and a desire to work with children.

EDUCATION

11	Contemporary Issues in Education (HP)	Contemporary Issues in Education is a college preparatory grade 11 English course integrated with the Education Pathway standards of the Education, Child Development, and Family Services sector which allows students to see where the skills of English intersect with the elements of education. Students conduct research, closely read, and analyze complex texts, evaluate instructional methodology and philosophy, and create a portfolio of reflections, activities, and compositions that, when synthesized, serve as the foundation for three capstone projects. Prerequisite: A 2.50 grade point average or higher.
11-12	* ROP Careers in Education w/ English 11 or 12 (P) Dual Enrollment (Education 10 Clovis Community College)	Studies include the nature and scope of the school system, the duties and opportunities of the professional teacher, factors relative to success in teaching, and credentialing requirements. Prerequisite: Grade of “C” or better in English 10, and English 11. Excellent attendance and behavior record in previous grade levels are required.

EMERGENCY RESPONSE

Year in School	Pathway Course	Description
11	* ROP Fire Fighting Technology I Dual Enrollment - Seniors Only (Fire Tech 1 Fresno City College)	Studies include preparing students for a career in the Fire Service. Students learn about firefighting organizations, the use and handling of equipment, fire protection systems, safety, fire behavior, and extinguishing methods. This class is intended to prepare students to attend an accredited Fire Academy after graduation. Prerequisite: None.

12	* ROP Fire Fighting Technology II Dual Enrollment Seniors Only (Fire Tech 1 Fresno City College)	Studies include the reinforcement of concepts from Fire Fighting Technology I and an increasing emphasis on leadership and advanced manipulative skills and methods. Prerequisite: Fire Fighting Technology I recommended, and transportation is required.
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PATIENT CARE

Year in School	Pathway Course	Description
11	* ROP Medical Careers (P)	Studies include learning transferable skills related to entry-level health occupations, exploration of career options in the health industry, and becoming knowledgeable of post-secondary educational requirements. Prerequisite: 2.5+ GPA required. Completion of Biology (P), Anatomy (P), and/or Chemistry (P) with a grade of “C” or better. Excellent attendance and behavior record in previous grade levels are required. Additional requirements include reliable transportation, fully vaccinated for all childhood vaccines, COVID-19 vaccine plus up-to-date boosters, current TB skin test, and ability to wear a mask for prolonged amount of time.
12	* ROP Health and Medical Wellness (P) Dual Enrollment (Med Term OT10 Clovis Community College; Uni-Track Nutrition 53)	This course will explore the many facets of public and medical health. Content will relate to individuals, communities, careers, and institutions directly involved with health and wellness issues. Students will explore the domains of health including psychosocial, physical, and environmental elements, and the impact on a person’s wellness. Prerequisite: 2.5+ GPA required. Completion of Biology (P), Anatomy (P), and/or Chemistry (P) with a grade of “C” or better. Excellent attendance and behavior record in previous grade levels are required. Additional requirements include reliable transportation, fully vaccinated for all childhood vaccines, COVID-19 vaccine plus up-to-date boosters, current TB skin test, and ability to wear a mask for prolonged amount of time.

PUBLIC SAFETY

Year in School	Pathway Course	Description
11	* ROP Criminal Justice	Studies include the awareness of career options (attorney, police officer, probation officer) and information in the area of law enforcement and private security for interested students. Prerequisite: Grade of “C” or higher in English 10, and English 11.
12	* ROP Criminal Investigation Dual Enrollment (Criminology 8 Clovis Community College)	Studies include an awareness of the various components of criminal investigation, with emphasis placed on the development of attitudes, skills, and competencies related to a criminal investigation. Prerequisite: Grade of “C” or higher in English 10, and English 11.

CLOVIS HIGH SCHOOL
Pathways

CHILD DEVELOPMENT		
Year in School	Pathway Course	Description
10	Exploration of Child and Adolescent Literature (HP)	Exploration of Child and Adolescent Literature is a grade 10 English Language Arts college preparatory course integrated with the Education Pathway standards. This course allows students to utilize Language Arts skills to investigate and evaluate the value and purpose of world literature for children and adolescents. Students synthesize knowledge of the developmental stages of physical, intellectual, social, and emotional development with an understanding of appropriate teaching materials and readings for each of the stages. Prerequisite: A 2.50 grade point average or higher.
11-12	* ROP Careers in Child Development Dual Enrollment (Child Dev 1 Clovis Community College)	Studies include the preparation to work in fields dealing with young children and developmental stages of children before birth to age 12. Students gain firsthand experience through classroom and worksite learning, job shadowing, and tours that enable them to determine the benefits of an education-related career. Prerequisite: Excellent attendance and citizenship.
DESIGN, VISUAL, AND MEDIA ARTS		
Year in School	Pathway Course	Description
10	Introduction to Digital Photography (P)	This is an introduction course to digital photography. Topics include digital camera operations, lighting technique, aesthetics, Photoshop, Light-room, and portfolio development. Students will explore exposure systems using aperture, shutter speed, and ISO combinations. Prerequisite: None.
11-12	Digital Photo II	This course has an emphasis in Adobe Photoshop in association with Digital Photography. The focus of this course is in using Photoshop and developing relationships with clients. Prerequisite: Introduction to Digital Photography with a C grade or better.
EDUCATION		
11	Contemporary Issues in Education (HP)	Contemporary Issues in Education is a college preparatory grade 11 English course integrated with the Education Pathway standards of the Education, Child Development, and Family Services sector which allows students to see where the skills of English intersect with the elements of education. Students evaluate instructional methodology and philosophy, and create a portfolio of reflections, activities, and compositions that, when synthesized, serve as the foundation for three capstone projects. Prerequisite: A 2.50 grade point average or higher, <u>AND</u> at least one of the following: Exploration of Child and Adolescent Literature with a “C” grade or higher, member of Educators Rising, participant in summer enrichment activities offered to Education Pathway students, or recommendation by Education Pathway instructor.
11-12	* ROP Careers in Education w/ English 11 or 12 (P) Dual Enrollment (Education 10 Clovis Community College)	Studies include the nature and scope of the school system, the duties and opportunities of the professional teacher, factors relative to success in teaching, and credentialing requirements. Prerequisite: Grade of “C” or better in English 10, and English 11. Excellent attendance and behavior records in previous grade levels required.

RESIDENTIAL and COMMERCIAL CONSTRUCTION

Year in School	Pathway Course	Description
10-12	Basic Metal Manufacturing	Studies include the basic principles of metal welding and forming to finish construction projects. Prerequisite: None.
9-12	Construction Technology 1 – Introduction	This course involves students in projects and problem-based learning experiences that introduce the world of construction. Prerequisite: None
11-12	* ROP Building Trades Internship	This is a senior level specialty course that will ideally have students working in off-campus internships. It begins with Fundamentals of Construction and can progress to placement into specialty building trades areas with local community partners. Each specialty area covers basic skills necessary for entry-level employment. Prerequisites: Reliable transportation (License and vehicle preferred), maturity, and a sincere desire to enter into a construction related career.
11-12	Building Information Modeling (P)	Building Information Modeling is designed as a single period art course for secondary students focusing on the drafting, design and building information modeling aspects of construction. The emphasis is on expressing creativity in a visual form by: (1) reviewing and applying the elements and principles of design and by (2) gaining a deeper insight into inspirations, theoretical elements and principles behind creative design. Additional emphasis will be placed on logical reasoning, visualization, and practical application using 1, 2, and 3-point perspective, color applications, Computer Aided Drafting, and 3-D modeling. Prerequisites: Sophomore, Junior or Senior standing; one year of math.
11-12	* ROP Building Scaled Structures (HP) Dual Enrollment (Construction 50 A (Fresno City College))	This course has been developed to integrate skills and concepts from the Building and Construction trades with applied mathematics and English. As a natural progression, students will apply the craft skills required to design and build a variety of structures that meet current code requirements. In addition, students will make real-world connections between construction, math, and English using written projects, construction documents that include creating blueprints, project packets, and student-centered construction projects. Prerequisite: None.
11-12	* ROP Electrical Systems – Sound and Communication (Electronic Systems 53 Fresno City College)	Studies include basic electronics, microcontrollers, the exploration of computers and computer networks, video security surveillance, burglar alarms, fire alarms, and an assortment of electronic systems. Through hands-on interactive projects students will prepare for entry into the telecommunications and electrical system industry. Prerequisite: None.

SYSTEMS DIAGNOSTICS, SERVICE, and REPAIR

Year in School	Pathway Course	Description
9-12	Basic Auto	This course provides students with information and activities that will stimulate understanding of the automobile and the automotive industry. It covers information regarding components of the automobile and how they work together. Prerequisite: None.
10-12	Auto 2	Studies include the principles of engines, chassis, electrical systems, brake, and suspension systems. Prerequisite: Basic Auto 1 with grade of "C" or higher.
10-12	Auto 3	This course covers two related areas of the automobile electrical systems and engine performance. Electrical systems involve the detailed study of electrical fundamentals: starting, charging, ignition, lighting, and auxiliary systems. Engine performance deals with the principles of engine compression, ignition, and carburetion. Students will learn to work with electrical test equipment commonly used in the industry. Prerequisite: Auto 2 with grade of "C" or higher.
11-12	* ROP Automotive Systems Technology Dual Enrollment (Auto Tech 9 (Fresno City College) (Even Years))	This Auto systems course is intended to give the student practical hands-on experience in diagnosing, troubleshooting and service procedures in the automotive field. The course also covers shop practice of maintenance and repair in the automotive specialty areas. Along with classroom work, this class will consist of a series of projects to be completed on automobiles. All repair jobs will be approved and assigned by the instructor; some students may choose to specialize in a certain area of interest. Prerequisite: Auto 3 with grade "C" or higher recommended.

11-12	*ROP Engine Technology Dual Enrollment (Auto Tech 9 (Fresno City College) (Odd Years)	Students gain practical, hands-on experience in diagnosing, troubleshooting, and servicing procedures in the automotive field with particular emphasis on engine service and repair. The course also covers the shop practice of maintenance and repair in the following areas: drive trains, axles, suspension, steering, brakes, and air conditioning. Students develop their skills through classroom instruction and a series of assigned projects. Prerequisite: Basic Auto or Auto 2 recommended.
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CLOVIS NORTH HIGH SCHOOL

Pathways

CHILD DEVELOPMENT		
Year in School	Pathway Course	Description
10	Exploration of Child and Adolescent Literature (HP)	Exploration of Child and Adolescent Literature is a grade 10 English Language Arts college preparatory course integrated with the Education Pathway standards. This course allows students to utilize Language Arts skills to investigate and evaluate the value and purpose of world literature for children and adolescents. Students synthesize knowledge of the developmental stages of physical, intellectual, social, and emotional development with an understanding of appropriate teaching materials and readings for each of the stages. Prerequisite: A 2.50 grade point average or higher, <u>AND</u> at least one of the following.
11-12	* ROP Careers in Child Development Dual Enrollment (Child Dev 1 Clovis Community College)	Studies include the preparation to work in fields dealing with young children and developmental stages of children before birth to age 12. Students gain firsthand experience through classroom and worksite learning, job shadowing, and tours that enable them to determine the benefits of an education-related career. Prerequisite: Excellent attendance and citizenship.
EDUCATION		
11	Contemporary Issues in Education (HP)	Contemporary Issues in Education is a college preparatory grade 11 English course integrated with the Education Pathway standards of the Education, Child Development, and Family Services sector which allows students to see where the skills of English intersect with the elements of education. Students conduct research, closely read, and analyze complex texts, evaluate instructional methodology and philosophy, and create a portfolio of reflections, activities, and compositions that, when synthesized, serve as the foundation for three capstone projects. Prerequisite: A 2.50 grade point average or higher.
11-12	* ROP Careers in Education w/ English 11 or 12 (P) Dual Enrollment (Education 10 Clovis Community College)	Studies include the nature and scope of the school system, the duties and opportunities of the professional teacher, factors relative to success in teaching, and credentialing requirements. Prerequisite: Grade of “C” or better in English 10, and English 11. Excellent attendance and behavior records in previous grade levels required.
PATIENT CARE		
Year in School	Pathway Course	Description
11	* ROP Medical Careers (P)	Studies include learning of transferable skills related to entry-level health occupations, the exploration of career options in the health industry, and becoming knowledgeable of post-secondary educational requirements. Prerequisite: Completion of Biology AB with a grade of “C” or higher. Maintain an overall GPA of 2.5 or higher.

12	* ROP Health and Medical Wellness (P) Dual Enrollment (Med Term OT10 Clovis Community College)	This course will explore the many facets of public and medical health. Content will relate to individuals, community, careers, and institutions directly involved with health and wellness issues. Students will explore the domains of health including psychosocial, physical, environmental elements and the impact on a person's wellness. Prerequisite: Maintain an overall GPA of 2.5 or higher.
12	* ROP Rehabilitation Therapy Careers (P) Dual Enrollment (Kines 22 Clovis Community College)	This course is designed to provide the student with opportunities to learn transferable skills related to entry-level occupational and physical therapy occupations, explore career options, and become knowledgeable with post-secondary educational requirements as related to such career options. The course introduces the student to therapy careers including occupational therapy, physical therapy, and other prominent therapy careers, placing an emphasis on a set of core skills and knowledge applicable to many health care disciplines; desirable employment attributes and job-seeking skills are addressed. Prerequisite: Biology, and Anatomy & Physiology are required. Maintain an overall GPA of 2.5 or higher.
PRODUCT INNOVATION and DESIGN		
Year in School	Pathway Course	Description
9-12	Computer Aided Design and Engineering (P)	This is a 3D modeling course utilizing <i>SolidWorks</i> ® that focuses on precision in design and engineering combined with programming to create tangible products using high end 3D printers, laser cutters, and Vinyl printers. Although not part of the pathway, this course compliments the technology and engineering concepts taught in the progression of courses. Prerequisite: Grade of B or better in Math 1 (or B or A in higher level math course)
11-12	Product Innovation and Design	This course is a project-based class. Students will practice what fabricators, engineers, and manufacturers of products really do, observing, questioning, experimenting with designs, and drawing conclusions. Students will design and fabricate products while furthering their skills in Solidworks and Graphic Design. Prerequisite: Computer Aided Design and Engineering
SOFTWARE and SYSTEMS DEVELOPMENT		
Year in School	Pathway Course	Description
9-10	Exploring Computer Science (P)	Exploring Computer Science is a yearlong course consisting of six units, approximately six weeks each. The course was developed around a framework of both computer science content and computations. Prerequisite: Advanced Math 8/Math 1, grade "B" or higher.
10-12	AP Computer Science Principles	AP Computer Science Principles is a course that delves into five specific aspects of computer science including: Internet - how the multi-layered systems work; Digital Information - use of a variety of tools; Big Data and Privacy - how to research current events; and Building Apps - how to create a series of applications. Prerequisite: Grade B or higher in Math 1, or a Grade B or A in a higher-level math course.
11-12	AP Computer Science A (HP)	This course is an introduction to computer science using Java programming language. Successful completion of this course will prepare students for the AP College Board exam in May. Prerequisite: Math 2 with grade "B" or higher.

CLOVIS WEST HIGH SCHOOL
Pathways

CHILD DEVELOPMENT		
Year in School	Pathway Course	Description
10	Exploration of Child and Adolescent Literature (HP)	Exploration of Child and Adolescent Literature is a grade 10 English Language Arts college preparatory course integrated with the Education Pathway standards. This course allows students to utilize Language Arts skills to investigate and evaluate the value and purpose of world literature for children and adolescents. Students synthesize knowledge of the developmental stages of physical, intellectual, social, and emotional development with an understanding of appropriate teaching materials and readings for each of the stages. Prerequisite: A 2.50 grade point average or higher.
11-12	* ROP Careers in Child Development Dual Enrollment (Child Dev 1 Clovis Community College)	Studies include the preparation to work in fields dealing with young children and developmental stages of children before birth to age 12. Students gain firsthand experience through classroom and worksite learning, job shadowing, and tours that enable them to determine the benefits of an education-related career. Prerequisite: Excellent attendance and citizenship. (Students travel to Clovis North for this class).
EDUCATION		
11	Contemporary Issues in Education (HP)	Contemporary Issues in Education is a college preparatory grade 11 English course integrated with the Education Pathway standards of the Education, Child Development, and Family Services sector which allows students to see where the skills of English intersect with the elements of education. Students conduct research, closely read, and analyze complex texts, evaluate instructional methodology and philosophy, and create a portfolio of reflections, activities, and compositions that, when synthesized, serve as the foundation for three capstone projects. Prerequisite: A 2.50 grade point average or higher.
11-12	* ROP Careers in Education w/ English 11 or 12 (P) Dual Enrollment (Education 10 Clovis Community College)	Studies include the nature and scope of the school system, the duties and opportunities of the professional teacher, factors relative to success in teaching, and credentialing requirements. Prerequisite: Grade of “C” or better in English 10, and English 11. Excellent attendance and behavior records in previous grade levels required.
BUSINESS MANAGEMENT		
Year in School	Pathway Course	Description
9-12	Computer Applications	This course is for students who desire keyboarding skills for college and personal use. Students will learn keyboard and word processing applications, databases, spreadsheets, graphics, and basic desktop publishing skills. Prerequisite: None
11-12	* ROP Small Business Management	Studies include the development of both business and marketing plans essential to the operation of a successful business. Prerequisite: Keyboarding and computer experience is helpful.
FINANCIAL SERVICES		
Year in School	Pathway Course	Description
10-12	Personal Finance (P) (Unitrack FN 30)	This course provides background and knowledge of essential, necessary financial skills for all students. It is designed to inform, alert, and educate students in the concepts of personal finance and money management. Core concepts enable students to implement decision-making skills necessary to become wise, knowledgeable consumers, savers, investors, users of credit, money managers, citizens, and members of a global workforce and society. Prerequisite: Computer Applications or demonstration of readiness.

11-12	Business & Financial Services Internship (P)	This course outlines concepts pertaining to a variety of business, related financial services. Students learn processes for loans, credit, and payment services to business and individuals. In addition, money and banking, lending fundamentals, and federal regulations are explored. Prerequisite: Financial Literacy
11-12	Accounting (Unitrack Acct 4A)	This course will provide a broad overview of the principles and procedures of the accounting function in a business context including definition of business and accounting terminology, introduction to double-entry system of accounting, recording, processing, and reporting, daily business transactions and events. Prerequisite: Math 2, and Financial Literacy Recommended

PERFORMING ARTS

Year in School	Pathway Course	Description
10-11	Drama 2 Technical Theater (P)	The student will study and apply the principles of group dynamics and collaboration during the pre-production through postproduction process of Theatrical Production. This course provides instruction in the implementation of theatrical designs for sets, lights, sound, properties, costumes, and makeup. Prerequisite: Drama 1 with "B" or higher, or permission of instructor
11-12	Advanced Technical Theater	This advanced technical theater arts course is designed to build upon skills learned in Drama 2 Technical Theater for students interested in becoming designers and leaders in the Technical Theater Arts world. Prerequisite: Drama 2 Technical Theater.
11-12	*ROP Performing Arts (w/English 11 or 12 (P)) (Even Years)	This class is a marriage of drama, music, and technology. It will prepare students for a possible career in the entertainment industry through all aspects of the production of a Broadway musical from preliminary choice of show, construction, lighting, and marketing to final accounting at the close of the run. Prerequisite: Recommended Drama 2 Technical Theater with "B" or higher, or permission of instructor.
11-12	* ROP Theater Production w/English 11 or 12 (P) (Odd Years)	Students create entire stage productions from acting methodology to stage design. Stage craft aspects include heavy lifting, and the use power tools including power saws, jigsaws, pneumatic staplers, ladders. Play production writing aspects include writing a play, directing, and producing, financing, stage designing, lighting, sound, costuming, publicity, performance, take down, and writing performance critiques. Prerequisite: Drama 1 with "B" or higher, or permission of instructor.

SYSTEMS DIAGNOSTICS, SERVICE and REPAIR

Year in School	Pathway Course	Description
9-12	Basic Auto	This course provides students with the information and activities which will stimulate understanding of the automobile and the automotive industry. It covers information regarding components of the automobile and how they work together, as well as general principles, and basic service. Prerequisite: None
10-12	Auto 2	Studies include the principles of engines, chassis, electrical systems, brake, and suspension systems. Prerequisite: Basic Auto 1 with grade of "C" or higher.
10-12	Auto 2 Automotive Service (P)	Auto 2 – Automotive Service is a course that provides students with introductory skills and laboratory-based, integrated curriculum that emphasizes preventive auto maintenance, automobile trouble shooting, tune-up, oil change, and lubrication skills; tire replacement, alignment, and balancing; and basic knowledge of brake, cooling, electrical, emission, fuel, ignition, steering, , suspension and transmission systems. Prerequisite: Basic Auto 1 with a grade of "C" or higher

10-12	Auto 3	This is a year-long course covering two related areas of the automobile electrical systems and engine performance. One part of the course deals with electrical needs of the automobile and related components. It involves detailed study of electrical fundamentals: starting, charging, ignition, lighting, and auxiliary systems. Engine performance deals with the principles of engine compression, ignition, and carburetion. Students will learn to work with electrical test equipment commonly used in the industry. Prerequisite: Auto 2 with grade of "C" or higher.
10-12	Introduction to Hybrid/Electric Vehicle Technology (P)	In this course, students will learn the fundamentals and advantages of hybrid/electric vehicle technology. Students will study the history of automotive technology, including gasoline, alternative fuels, and other propulsion methods. The course includes background theory on electrical power, including definitions of common units of electricity including volts, watts, watt-hours, and basic physical properties such as energy, power, aerodynamics, electric mpg, and rms voltage. Prerequisite: Basic Auto 1 with a grade of "C" or higher.
11-12	* ROP Engine Technology (Even Years)	Students gain practical, hands-on experience in diagnosing, troubleshooting, and servicing procedures in the automotive field with particular emphasis on engine service and repair. The course also covers the shop practice of maintenance and repair in the following areas: drive trains, axles, suspension, steering, brakes, and air conditioning. Students develop their skills through classroom instruction and a series of assigned projects. Prerequisite: Basic Auto or Auto 2 recommended.
11-12	* ROP Automotive Systems Technology (Odd Years)	This Auto systems course is intended to give the student practical hands-on experience in diagnosing, troubleshooting and service procedures in the automotive field. The course also covers shop practice of maintenance and repair in the automotive specialty areas. Along with classroom work, this class will consist of a series of projects to be completed on automobiles. All repair jobs will be approved and assigned by the instructor: some students may choose to specialize in a certain area of interest. Prerequisite: Auto 3 with grade "C" or higher recommended.
11-12	* ROP Diesel Engine Technology (Even Years)	This course is designed to train students for employment opportunities available within the agricultural/industrial industry. This course emphasizes skills necessary in the field of diesel equipment mechanics where students learn how to perform major overhaul and tune-up of diesel engines. Prerequisite: Site requirements, or instructor permission.
12	Heavy Medium Duty Truck 2 (P) (Odd Years)	Students will obtain the necessary skills to meet industry experiences to pursue a career in the field of diesel Mechanics. Heavy Medium Duty Truck (Diesel 2) goes deeper into the concepts of Diesel Engine Technology plus covers system diagnostics for fuel, oil, cooling and air induction Prerequisite: Diesel Engine Technology.



Center for Advanced Research & Technology

PROGRAMS

BIOMEDICINE		
Year in School	Pathway Course	Description
11 th - 12 th	Year One: Clinical Anatomy & Physiology (P) (2 Periods) Adv. Topics in Medicine (P) Composition through Careers English 11 (P) or Exp. English 12 Honors (HP)	Students explore issues in medical science and human anatomy/physiology through dissections, medical case studies and research projects. Students investigate healthy body functions and its reaction to diseases and collaborate with medical professionals. Prerequisite(s): "C" or better in Biology, Chemistry, Algebra/ Math 1, and English.
12 th	Year Two: Adv. Topics in Medical Research (P) (2 periods) Biochemistry (P) Exp. English 12 Honors (HP)	
BIOTECHNOLOGY		
Year in School	Pathway Course	Description
11 th - 12 th	Biotechnology Accelerated & Research (P) (2 periods) Chemistry (P) OR AST Science (P) Composition through Careers English 11 (P) or Exp. English 12 Honors (HP)	Students apply DNA technology to genetically engineer bacteria, solve medical mysteries, clone tissues, and diagnose genetic diseases. Students explore science fields in medicine, biology, chemistry, agriculture, and environmental science.
ENVIRONMENTAL SCIENCE		
Year in School	Pathway Course	Description
11 th - 12 th	Zoology (P) Environmental Research & Technology (P) (2 periods) Composition through Careers English 11 (P) or Exp. English 12 Honors (HP) Uni-Track CSUF concurrent college credits available	Students participate in hands-on projects relating to careers in marine biology, wildlife rehabilitation, air quality, river ecology, alternative energy, and forests. Students work with environmental professionals and government agencies to complete scientific projects.
BUSINESS AND FINANCE		
Year in School	Pathway Course	Description
11 th - 12 th	Money and Banking (P) (2 periods) U.S. History or Gov. and Econ (P) Composition through Careers English 11 (P) or Exp. English 12 Honors (HP)	Students research and learn about business and finance on a global and local level. They gain real-world experience from industry leaders, guest speakers and internships. Students develop leadership skills and learn about careers in entrepreneurship and in various areas of the business and finance sector.

INTERACTIVE GAME DESIGN		
Year in School	Pathway Course	Description
12th	Interactive Game Design (P) (2 periods) Exp. English 12 Honors (HP) Technology Applications Clovis Community concurrent college credits available	Students learn about graphic design, animation, modeling, games-play, and story design and use industry software to create original games rendered in 2D and 3D. Prerequisite(s): Database, Graphics, Programming, or Web Design.
DIGITAL MARKETING AND ENTREPRENEURSHIP		
Year in School	Pathway Course	Description
11 th – 12th	Economics of Marketing & Advertising (P) (2 periods) Gov. and Economics or US History (P) Composition through Careers English 11 (P) or Exp. English 12 Honors (HP)	Students learn how to develop a brand through product development and pricing strategies, promotional campaigns, and global product placements. Online advertising is a focus and industry-standard technology is used to conduct market research, create advertising products, and manage social media campaigns.
CYBERSECURITY		
Year in School	Pathway Course	Description
11 th – 12th	Cybersecurity (P) (2 periods) Composition through Careers English 11 (P) or Exp. English 12 Honors (HP) Technology Applications Fresno City concurrent college credits available	Students learn to design, build, secure, and analyze computer networks, media centers, and security systems. This lab offers certifications in CIW, WSA, CompTIA's A+ and security.
DIGITAL MEDIA AND GRAPHIC DESIGN		
Year in School	Pathway Course	Description
11 th – 12th	Year One: Digital Media and Graphic Design (P) (2 periods) Composition through Careers English 11 (P) or Exp. English 12 Honors (HP) Technology Applications	Students develop skills in message design including color, typography, and design principles. Students investigate graphic and web techniques in cooperative teams like corporate settings. Industry-standard software is used to create original products.
12th	Year Two: Adv. Studies in Media Communication & Design (P) (2 periods) Exp. English 12 Honors (HP) Technology Applications 2	
DIGITAL VIDEO PRODUCTION AND BROADCAST		
Year in School	Pathway Course	Description
11 th – 12th	Year One: Digital Video (P) (2 periods) Composition through Careers English 11 (P) or Exp. English 12 Honors (HP) Technology Applications	Students develop skills in television and film production using industry-standard software packages while engaging in hands-on and integrated curriculum. Students work on all stages of production while creative products such as short films, advertisements, journalism broadcasts and documentaries.

	Year Two: Adv. Studies in Media Communication & Design (P) (2 periods) Exp. English 12 Honors (HP) Technology Applications	
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ENGINEERING, MANUFACTURING AND ROBOTICS

Year in School	Pathway Course	Description
11 th – 12 th	Year One: Engineering (P) (2 periods) Physics Technology (P) Composition through Careers English 11 (P) or Exp. English 12 Honors (HP)	Creativity, knowledge, and skill are used to develop solutions to real world mechanical engineering problems. Working as individuals and in small teams, students design, test and evaluate working prototypes of their solutions. Students will learn how to bring engineering designs into the physical world using a variety of engineering tools, skills, and practices including cutting edge CAD and CAM solutions. CNC machines, 3D printers, and laser cutters are just a few of the technologies that will be used to manufacture student-engineered design solutions. Students will be introduced to basic electronics, microcontrollers and computer programming while learning to design, build, and program robotic and automation devices. Recommended Prerequisites: “C” or better in English and Math 2
12 th	Year Two: currently not offering a Y2	

WEB APPLICATIONS AND DEVELOPMENT

Year in School	Pathway Course	Description
11 th – 12 th	Applications Programing (P) (2 periods) Composition through Careers English 11 (P) or Exp. English 12 Honors (HP) Technology Applications Clovis Community concurrent college credits available	From smartphones and video games to music, medicine, and more, computer science touches everything we do. Students will discover how the Internet works, dig into cryptography, and build their own apps. They will be introduced to the broader field of Computer Science while becoming certified to design, develop, and deploy web apps using developer tools such as CSS, HTML, JavaScript, and SQL. Students apply the concepts of object-oriented programming, scripting, and user-interface design to ensure that end-users have a positive experience and keep returning to their applications.

LAW AND POLICY

Year in School	Pathway Course	Description
11 th – 12 th	Law and Public Policy (P) (2 periods) Government & Economics (P) Composition through Careers English 11 (P) or Exp. English 12 Honors (HP)	Students explore major aspects of constitutional, criminal, and civil law. Projects teach students about individual rights, criminal procedure, how laws are made, and how to make a legal argument. Students research and discuss current and historical controversial issues relating to the law and participate in mock trials and an advocacy project with mentor attorneys.

FORENSIC RESEARCH AND BIOTECHNOLOGY

Year in School	Pathway Course	Description
11 th – 12 th	Forensic Research and Biotechnology (P) (2 periods) Physical Forensic Science (P) Composition through Careers English 11 (P) or Exp. English 12 Honors (HP)	Students investigate science techniques to solve intriguing problems connected to crime and the law. Interactive physical evidence simulations include topics such as: DNA/biotechnology, fingerprinting ballistics, and scene reconstruction. Recommended prerequisites: “C” or better in Biology, Algebra 1/Math 1 and English.




PSYCHOLOGY AND HUMAN BEHAVIOR

Year in School	Pathway Course	Description
11 th - 12 th	Psychology of Human Behavior (P) (2 periods) Neuroscience (P) Composition through Careers English 11 (P) & Exp. English 12 Honors (HP) Clovis Community concurrent college credits available	Students investigate the inner workings of the human mind on both physiological and chemical levels through the study of the brain and its components. Projects provide an interactive experience and experimental research using human test subjects. Students examine topics of learning, psychological perspectives, behavior theories, drug abuse, and mental disorders.







Career Technical Education Pathway Matrix 2023-2024




Buchanan High School

CTE Industry Sector: Engineering and Architecture 			
CTE Career Pathway: Engineering Design		2017-2018	
Course Name/Number	Introductory	Concentrator	Capstone
<i>Introduction to Design 1,2 (PLTW) (P)</i> 37F02.CTE	7700		
<i>Honors Principles of Engineering (PLTW)</i> <i>(HP) 53G04. CTE</i>		7730	
<i>Honors Engineering Design & Development (PLTW) (HP) 35G05.CTE</i>			7731
CTE Industry Sector: Energy, Environment, and Utilities 			
CTE Career Pathway: Environmental Resources		2016-2017	
Course Name/Number	Introductory	Concentrator	Capstone
<i>Honors Environmental Sustainability (HP) 35D04.CTE</i>		7611	
<i>AP Environmental Science (HP)</i> 55D99.CTE			7612
CTE Industry Sector: Arts, Media, and Entertainment 			
CTE Career Pathway: Design, Visual and Media Arts		2017-2018	
Course Name/Number	Introductory	Concentrator	Capstone
<i>Introduction to Digital Photography (P)</i> 77F09.CTE <i>(Unitrack with CSUFresno MCJ 17)</i>	7219		
<i>Digital Photography II 73F01.CTE</i>		7217	
<i>* ROP Digital Photography R7F06</i>			7221
<i>* ROP Journalism and Publishing (P)</i> <i>w/English 11 or 12 R3004</i> <i>(Unitrack with CSUFresno MCJ 2)</i>			7221
<i>* ROP Publishing Management R9079</i> <i>(Unitrack with CSUFresno MCJ 2)</i>			7221

Buchanan High School (continued)





CTE Industry Sector: Arts, Media, and Entertainment				
CTE Career Pathway: Production and Managerial Arts				2017-2018
Course Name/Number	Introductory	Concentrator	Capstone	
<i>Videography 1 AB (P) 77G99.CTE</i>	7243			
<i>Digital Film Making (P) 77F08.CTE</i>		7244		
* <i>ROP Multimedia Communication (P) R7F01 (Even Years)</i> * <i>ROP Videography (P) R7301 (Odd Years)</i> (Unitrack MCJ 15)			7245	
CTE Industry Sector: Hospitality, Tourism, and Recreation				
CTE Career Pathway: Food Service and Hospitality				2016-2017
Course Name/Number	Introductory	Concentrator	Capstone	
<i>Food Science and Nutrition (P) 33G11.CTE</i>		8020		
* <i>ROP Culinary Arts (P) R3017</i>			8021	
* <i>ROP Culinary Arts and Hospitality Management (P) R3905</i>			8021	
CTE Industry Sector: Health Science and Medical Technology				
CTE Career Pathway: Patient Care				2016-2017
Course Name/Number	Introductory	Concentrator	Capstone	
<i>Medical Health Careers 33G17.CTE (P)</i>	7920			
* <i>ROP Sports Medicine (P) R5045</i> (Unitracked Kinesiology 38)			7922	
CTE Industry Sector: Arts, Media, and Entertainment				
CTE Career Pathway: Performing Arts				2018-2019
Course Name/Number	Introductory	Concentrator	Capstone	
<i>Drama 2 Technical Theater (P) 88599.CTE</i>	113; 7236			
<i>Advanced Technial Theater 83F01.CTE</i>		7237		

Clovis East High School




CTE Industry Sector: Agriculture and Natural Resources 			
CTE Career Pathway: Agricultural Mechanics		2016-2017	
Course Name/Number	Introductory	Concentrator	Capstone
Ag Engineering I 39007.CTE Dual Enrollment (Reedley College) Mechanized AG 40	7120		
Ag Engineering II (P) 39020.CTE Dual Enrollment (Reedley College) Mechanized AG 41	7120		
Ag Engineering III 39021.CTE Dual Enrollment (Reedley College) Mechanized AG 44		7121	
* ROP Welding Fabrication & Applications R3041 Credit by Examination (Butte College) Welding 20		7121	
* ROP Welding Processes and Fabrication R3029 Credit by Examination (Butte College) Welding 20			7122
CTE Industry Sector: Agriculture and Natural Resources 			
CTE Career Pathway: Agricultural Science		2016-2017	
Course Name/Number	Introductory	Concentrator	Capstone
Biology and Sustainable Ag (P) 35D01.CTE	7130		
Chemistry and Agriscience (P) 35D02.CTE Dual Enrollment (Reedley College) (PLS2/Soil Science)		7131	
Food Science (P) 33G08.CTE		7131	
Advanced Interdisciplinary Science for Sustainable Agriculture (P) 35D03.CTE			7135
CTE Industry Sector: Agriculture and Natural Resources 			
CTE Career Pathway: Animal Science		2016-2017	
Course Name/Number	Introductory	Concentrator	Capstone
Ag Science 1AB 35001.CTE	7130		
CDE Animal Science (P) 35G02.CTE Dual Enrollment (Reedley College) Animal Science 1		7141	
Equine Anatomy & Physiology Science 33910.CTE			7142
* ROP Equine Science R5001 Dual Enrollment (Reedley College Animal Science 21)			7142

* ROP Veterinary Science (P) R9986			7142
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Clovis East High School (continued)

CTE Industry Sector: Agriculture and Natural Resources			
CTE Career Pathway: Plant and Soil Science			2016-2017
Course Name/Number	Introductory	Concentrator	Capstone
<i>Art and History of Floral Design (P)</i> 77F05.CTE Dual Enrollment (Reedley College) Environmental Horticulture 37	7170		
<i>Farm to Table 33G23.CTE</i>			7172
<i>Ornamental Horticulture 30255.CTE</i>		7171	
<i>Plant Production Management (P)</i> 33G12.CTE			7172
<i>Advanced Floral Design (P) 33F01.CTE</i>			7172
CTE Industry Sector: Public Services			
CTE Career Pathway: Emergency Response			2016-2017
Course Name/Number	Introductory	Concentrator	Capstone
* ROP Fire Fighting Tech I R3018 Dual Enrollment - Seniors Only Fire Tech 1 (Fresno City College)		8421	
* ROP Fire Fighting Tech II R3028 Dual Enrollment - Seniors Only Fire Tech 1 (Fresno City College)			8422
CTE Industry Sector: Public Services			
CTE Career Pathway: Public Safety			2016-2017
Course Name/Number	Introductory	Concentrator	Capstone
* ROP Criminal Justice R9048		8411	
* ROP Criminal Investigation R9094 Dual Enrollment Criminology 8 (Clovis Community College)			8412
CTE Industry Sector: Health Science and Medical Technology			
CTE Career Pathway: Patient Care			2016-2017
Course Name/Number	Introductory	Concentrator	Capstone
* ROP Medical Careers (P) R3019		7921	
* ROP Health and Medical Wellness (P) R3G04 Dual Enrollment (Med Term OT10) (Clovis Community College; Unitrack: Nutrition 53)			7922



Clovis High School


CTE Industry Sector: Building and Construction Trades 			
CTE Career Pathway: Residential and Commercial Construction 2016-2017			
Course Name/Number	Introductory	Concentrator	Capstone
<i>Basic Metal Manufacturing 30073.CTE</i>		7341	
<i>Construction Technology 1 Introduction 33G04.CTE</i>	7340		
* ROP Building Trades Internship R3016			7342
* ROP Multi-Craft Core Curriculum: <i>Building Scaled Structures (P) R3G01</i> Dual Enrollment Construction 50 A (Fresno City College)			7342
<i>Building Information Modeling (P) 77F10.CTE</i>		7341	
* ROP Electrical Systems, Sounds and Communication R3021 Dual Enrollment Electronic Systems 53 (Fresno City College)			7342
CTE Industry Sector: Transportation 			
CTE Career Pathway: Systems Diagnostics, Service, and Repair 2016-2017			
Course Name/Number	Introductory	Concentrator	Capstone
<i>Basic Automotive 30087.CTE</i>	8530		
<i>Automotive 2 30088.CTE</i>		8531	
<i>Automotive 3 30089.CTE</i>		8531	
* ROP Auto Systems Technology R3002 <i>(Even Years)</i> *ROP Engine Technology R3010 <i>(Odd Years)</i> Dual Enrollment Auto Tech 9 (Fresno City College)			8532
CTE Industry Sector: Arts, Media and Entertainment 			
CTE Career Pathway: Design, Visual, and Media Arts 2018-2019			
Course Name/Number	Introductory	Concentrator	Capstone
<i>Introduction to Digital Photography (P) 77F09.CTE</i>	7219		
<i>Digital Photography II 73F01.CTE</i>		7220	

Clovis North High School


CTE Industry Sector: Information and Communication Technologies 			
CTE Career Pathway: Software and Systems Development 2017-2018			
Course Name/Number	Introductory	Concentrator	Capstone
Exploring Computer Science (P) 43G01.CTE	8130		
AP Computer Science Principles A (HP) 43G03.CTE		8131	
AP Computer Science (HP) 44908.CTE			8132
CTE Industry Sector: Health Science and Medical Technology 			
CTE Career Pathway: Patient Care 2016-2017			
Course Name/Number	Introductory	Concentrator	Capstone
* ROP Medical Careers (P) R3019		7921	
* ROP Health and Medical Wellness (P) R3G04 Dual Enrollment Med Term OT 10 (Clovis Community College)			7922
* ROP Rehabilitation Therapy Careers (P) R3G03 Dual Enrollment Kinesiology 22 (Clovis Community College)			7922
CTE Industry Sector: Manufacturing and Product Development 			
CTE Career Pathway: Product Innovation and Design 2020-2021			
Course Name/Number	Introductory	Concentrator	Capstone
Computer Aided Design and Engineering (P) 43G02.CTE		8240	
Innovation and Product Design 33G22.CTE			8241


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CTE Industry Sector: Business and Finance 			
CTE Career Pathway: Business Management 2016-2017			
Course Name/Number	Introductory	Concentrator	Capstone
Computer Applications 39099.CTE		7411	
* ROP Small Business Management R9095			7412
CTE Career Pathway: Financial Services 2016-2017			
Course Name/Number	Introductory	Concentrator	Capstone
Personal Finance (P) 33G14.CTE (Unitrack FN 30)		7420	
Business Financial Service Internship (P) 33G16.CTE		7421	
Accounting (P) 33G21.CTE (Unitrack Acct 4A)			7422
CTE Industry Sector: Arts, Media, and Entertainment 			
CTE Career Pathway: Performing Arts 2016-2017			
Course Name/Number	Introductory	Concentrator	Capstone
Drama 2 Tech Theater (P) 88F99.CTE	7236		
Advanced Technical Theater 83F01.CTE		7241	
*Performing Arts (w/English) (P) R8010 (Odd Years) *Theater Production (w/English) (P) R9073 (Even Years)			7242

CTE Industry Sector: Transportation 			
CTE Career Pathway: Systems Diagnostics, Service, and Repair 2016-2017			
Course Name/Number	Introductory	Concentrator	Capstone
Basic Automotive 30087.CTE	8530		
Automotive 2 30088.CTE		8531	
Auto 2 Automotive Service (P) 33902		8531	
Automotive 3 30089.CTE		8531	
Intro to Hybrid/Elec (P)		8531	
* ROP Engine Technology R3010 (Even Years) *ROP Auto Systems Technology R3002 (Odd Years)			8532
* ROP Diesel Engine Technology R3050 (Even Years) *ROP Heavy Med Duty Truck 2 (P) R3903 (Odd Years)			8532

All High Schools

CTE Industry Sector: Education, Child Development, and Family Services 			
CTE Career Pathway: Child Development (All High Schools) 2016-2017			
Course Name/Number	Introductory	Concentrator	Capstone
<i>Exploration of Child and Adolescent Literature (HP)</i> <i>English 10 22B10.CTE</i>	7500		
* ROP Careers in Child Development R9081 (P) Dual Enrollment Child Development 1 (Clovis Community College)			7511

CTE Industry Sector: Education, Child Development, and Family Services 			
CTE Career Pathway: Education (All High Schools) 2016-2017			
Course Name/Number	Introductory	Concentrator	Capstone
<i>Contemporary Issues in Education (HP)</i> <i>English 11 22B11.CTE</i>		7530	
* ROP Careers in Education w/ English 12 (P) R9046 (ERWC at CHS, CEHS) Dual Enrollment Education 10 (Clovis Community College)			7531

CTE PATHWAY REQUIREMENTS:

Course Sequence: Two or more related CTE courses taken in sequence. A course pathway provides coherent, rigorous content aligned with the challenging academic standards, relevant technical knowledge, and skills needed to prepare for further education and careers in current emerging professions.

- **Introductory Course:** An initial or survey course in CTE program intended to provide a beginning or introductory level of information about an *industry sector or career pathway*. The first course in a CTE *course sequence*.
- **Concentrator Course:** A CTE course beyond the introductory level that is intended to provide more in-depth instruction in and exploration of a specific *industry sector*. The second course and succeeding courses of a planned CTE program sequence.
- **Capstone Course:** The final course in a planned sequence of courses for a CTE program that provides a rigorous and intensive culmination of a course of study. Capstone courses are typically offered through *Regional Occupational Centers and Programs (ROCP's)*.
- Perkins V (Brustein Esq)
- CTE Concentrator means a student served by an eligible recipient who has-
- 1) Earned at least 12 credits within a career and technical education program or program of study; or
- 2) completed such a program if the program encompasses fewer than 12 credits or the equivalent total
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Career Technical Education Courses Approved for College Articulation Credit

High School	High School Course	College/University Course	Institution
Buchanan	Introduction to Digital Photography	MCJ 17	CSUFresno
Buchanan	ROP Journalism and Publishing	MCJ 2	CSUFresno
Buchanan	ROP Publishing Management	MCJ 2	CSUFresno
Buchanan	ROP Multimedia Communication/ ROP Videography	MCJ 15	CSUFresno
Buchanan	ROP Sports Medicine	Kinesiology 38	CSUFresno
Clovis East	Ag Engineering I	Mech Ag 40	Reedley College
Clovis East	Ag Engineering II	Mech Ag 41	Reedley College
Clovis East	Ag Engineering III	Mech Ag 44	Reedley College
Clovis East	ROP Welding Fabrication & Application	Welding 20	Butte College
Clovis East	ROP Welding Processes and Fabrication	Welding 20	Butte College
Clovis East	Chemistry and Agriscience	PLS2/Soil Science	Reedley College
Clovis East	CDE Animal Science	Animal Science I	Reedley College
Clovis East	ROP Equine Science	Animal Science 21	Reedley College
Clovis East	Art and History of Floral Design	Env Horticulture 37	Reedley College
Clovis East	Fire Fighting I and II	Fire Tech I	Fresno City College
Clovis East	Criminal Investigation	Criminology 8	Clovis Community College
Clovis East	Health and Medical Wellness	Medical Term OT 10	Clovis Community College
Clovis East	Health and Medical Wellness	Nutrition 53	CSUFresno
Clovis High	Building Scaled Structures	Construction 50A	Fresno City College
Clovis High	Electrical Systems	Elec Systems 53	Fresno City College
Clovis High	Auto Systems Technology	Auto Tech 9	Fresno City College
Clovis North	Health and Medical Wellness	Medical Term OT 10	Clovis Community College
Clovis North	Rehabilitation Careers	Kinesiology 22	Clovis Community College
Clovis West	Accounting	Accounting 4A	CSUFresno
Clovis West	Personal Finance	Finance 30	CSUFresno

District Wide	Careers in Child Development	Child Dev I	Clovis Community College
District Wide	Careers in Education	Education 10	Clovis Community College



