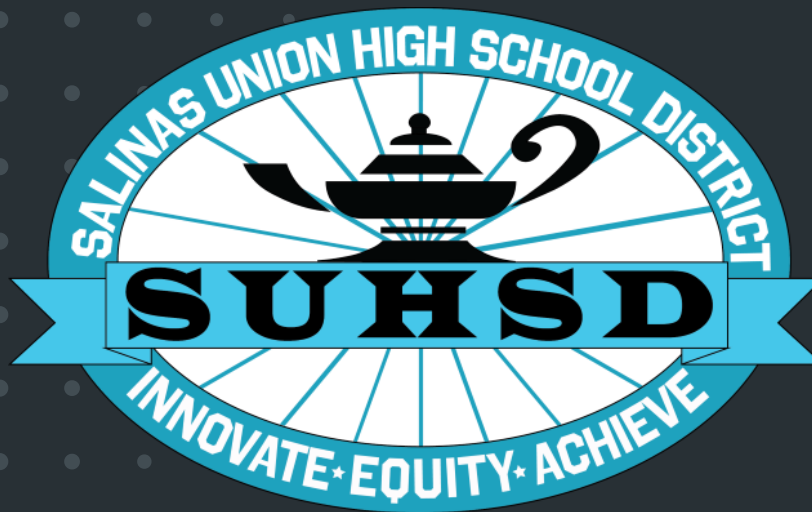


Salinas Union High School District

CTE HANDBOOK

HIGH SCHOOL



431 West Alisal Street
Salinas, CA 93901



831-796-7000



www.salinasuhd.org

2023-2024

CAREER TECHNICAL EDUCATION (CTE) PATHWAYS AND ACADEMIES

Career and Technical Education (CTE) offers courses taught by industry professionals so students can attain 21st century career skills paired with real-world academics in a variety of different courses across 13 industry sectors. Our classes are designed to support student success in both college and career by developing students to have marketable skills and certifications, successful habits and real world industry experience.

CTE Pathway classes are offered at Mission Trails ROP Center, Alisal High School, Salinas High School, North Salinas High School, Everett Alvarez High School, Rancho San Juan High School, Mount Toro High School and El Puente High School. In many of our CTE classes, students will be given the opportunity to participate in job shadowing, classes at local offsite locations, work-based learning experiences and Career Student Leadership Organizations (CTSOs) such as Future Farmers of America, SkillsUSA and Health Occupations Students of America (HOSA).

CTE Academies exist in some schools and are designed to offer students the opportunity to integrate academic studies with a specific career. The focus or theme of each academy is incorporated throughout academic classes, including math, science, English and social studies as well as career technical education classes in a particular CTE pathway. The following academies are available at our district:

CTE Academy	School
Health Academy	AHS and NSHS
Engineering Academy	AHS
Fitness and Sports Training (FAST Academy)	SHS
Green Construction Academy	SHS
Agriculture International Academy	EAHS

Credits applicable toward high school graduation can be earned each semester. Normally 10 credits per semester are awarded for each one hour long yearly class. CTE courses meet the Salinas Union High School District graduation requirements for vocational/career and technical education or elective. Some courses meet science or visual and performing arts credit. Most CTE courses meet A-G requirements.

FREQUENTLY ASKED QUESTIONS

What is Career Technical Education (CTE)? Career and Technical Education is a program of study that involves a multiyear sequence of courses that integrate core academic knowledge with technical and occupational knowledge to provide students with a pathway to postsecondary education and careers. Our courses teach high school students to succeed in careers and college in a professional, hands-on environment. Courses are offered within a variety of industry sectors where students can explore and develop technical skills that will lead them to higher education or into the workplace.

How are CTE classes structured?

Each CTE Course is part of a sequence of courses related to a particular occupation called a “pathway”. Multiple pathways are part of an industry sector.

Why take a CTE course? CTE courses are sequenced to create pathways for students in a course of study, which can lead to employment and/or post-secondary education opportunities. CTE can help students get the experience needed to get a job of their choice and explore careers in a variety of fields. Many classes include the opportunity to job shadow in a business or industry within our community.

How are CTE classes unique? CTE classes are conducted in classrooms equipped to industry standards. Most courses are a combination of classroom instruction and work-based learning (WBL). Classes are taught by highly-qualified professionals from the industry who are credentialed through the California Commission on Teacher Credentialing (CTC) to teach in their areas of expertise.

How does a student become a “Pathway Completer”?

A CTE Pathway “Completer” is a student who completes a CTE pathway sequence (concentrator and capstone courses within the same area of study) and passes the capstone course with a C- or better. Students should work with their Academic Counselor and Career Counselor to select the pathway that best meets their career interests.

Are CTE classes A-G Approved? Yes. Most of our CTE courses are A-G approved.

Can I get a job after completing a CTE Pathway? Yes. CTE courses are aligned to CTE Anchor Standards which reflect the expectations from business and industry and most offer entry level industry certifications. Students enrolled in CTE courses will master sector-specific core academic standards, communication skills, create a career and education plan, apply technology, utilize critical thinking, practice personal health, understand financial literacy, act as a responsible citizen, model integrity, ethical leadership and effective management, work productively in teams, demonstrate creativity and innovation, employ reliable research strategies and understand the environmental, social and economic impacts of decisions. Thus, students who complete a CTE Pathway are better prepared to obtain entry level employment after high school.

REGISTRATION

HIGH SCHOOL STUDENTS:

SUHSD has a Career Center at each comprehensive site to ensure that all students have college and career exploration opportunities. These Career Centers are staffed by a Career Technician, Career Counselor and Work Experience Coordinator. Our Work Experience Coordinators assist students with work permits, community service and connecting Work Based Learning opportunities to CTE courses. Our Career Counselors are dedicated to guiding students in the selection of a CTE Pathway or academy that is aligned with their life goals. Career Counselors also monitor student success and guide students in selecting a postsecondary institution of their choice. Students select their CTE courses side by side with the academic counselor during pre-registration every spring. For further information on college and career opportunities, contact the Work Experience Coordinator and Career Counselors at your school site.

Career Center Staff Contact Information:

AHS	Maira Amador , Career Counselor Dr. Julissa Mendoza, Work Experience Coordinator	(831) 796-7600	maira.amador@salinasuhd.org julissa.mendoza@salinasuhd.org
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EPS	Avilene Tiscareno, Career Counselor/Work Experience Coordinator	(831) 796-7700	evelyn.tiscareno@salinasuhd.org
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SHS	Allan Schooley, Career Counselor Martha Arevalo, Work Experience Coordinator	(831)796-7400	allan.schooley@salinasuhd.org marta.arevalo@salinasuhd.org
MTHS	Reyna Vargas, Career Counselor/Work Experience Coordinator	(831) 796-7700	reyna.vargas@salinasuhd.org
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CTE SECTORS

AGRICULTURE AND NATURAL RESOURCES SECTOR

Agriculture and Natural Resources Sector							
Course sequence	AG Business Pathway	AG Mechanics Pathway	Animal Science Pathway	Ornamental Horticulture Pathways		Agriscience Pathway Sub Pathway: Sustainable Agriculture	Plant and Soil Science Pathway
Introductory Course						Biology and Sustainable AG	
Concentrator Course	AG Business Occupations	AG Mechanics 1/2	Animal Care 1/2	Art History of Floral Design 1/2	Environmental Horticulture 1/2	Chemistry and Agriscience	AG Technology and Seed Science
Capstone Course	Adv AG Business	AG Mechanics 3/4	Vet Science	AG Business Floral Design	Hydrology, Landscape, & Sustainable Environmental Design	Advanced Interdisciplinary Science for Sustainable AG	Advanced Seed Science and Research: Plant Genetics and Breeding



Sector description: The Agriculture and Natural Resources Sector Pathways are designed to prepare students for entry level positions as production associate, mechanic, farm hand, floral designer, gardener or equine manager or related fields. Students study skills as marketing, sales, management, safety practices, use of tools, project planning, welding, concrete work, electrical wiring, carpentry, livestock production and marketing, animal care, veterinary practices, floral based projects, plant growth and development, plant nutrition, garden preparation, landscape design, life, earth, physical and chemistry sciences with agricultural applications, including the chemical and biological principles that govern plant science, classify seeds and analyze the biological changes in seed quality during production, all necessary skills for entry level positions in the above mentioned employment fields. For more information visit: www.salinasuhd.org/rop

Ag Business Occupations: This course is UC “G” (college preparatory elective) approved and meets the vocational education, elective or VAPA graduation requirement. Credits: 10. This course is designed for the study of agriculture business and economics for the college bound students with interest in agriculture. Through the course, the student will understand and apply basic economic principles as they relate to agriculture and agricultural production systems work within global economic systems, including basic economic concepts, supply and demand, pricing and marketing considerations, production factors, resource allocation, cost analysis, problems specific to agriculture, plus state and federal farm programs affecting the economic positions of agriculture companies. Including life skills such as resumes, job applications, interview skills, and college and scholarship applications will be included. The students will develop a “business” that will produce, package, determine prices, and market their products.

Advanced Ag Business Occupations: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. It is a capstone course for the CTE Ag Business Pathway Credits: 10. This course provides a basic understanding of the marketing aspects of the agricultural industry including global agricultural markets. This course is designed for students interested in Agriculture Business and Agriculture Production. Along with classroom instruction, this course offers co-curricular on-the-job learning experience related to tasks performed in Agri-Business. This would include companies that allow students in the following occupations: Agriculture Production, Supplies and Services, Mechanics, Processing, Ornamental Horticulture and Natural Resources and Rural Recreation.

Agriculture Mechanics 1-2: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Certifications offered: OSHA 10 General: Agriculture and iCEV: Southwest Professional Communications Certification. Credits: 10. This course is strongly recommended for all beginning students, those seeking an extended agricultural mechanics studies program and those students wanting a variety of skills in agricultural mechanics. This course will cover general equipment and shop safety practices, selection and use of hand and power tools, project planning with materials, oxy-acetylene and arc welding, basic concrete work, basic electrical wiring, and principles of carpentry. Career awareness, Future Farmers of America (FFA) achievement programs, and supervised project program opportunities will also be studied. Practical experience will be gained through student completion of selected projects related to study areas. Individual student construction of projects will complement class studies and qualified projects will be entered in the county fair for competition. FFA and Supervised Agricultural Experience Program (SAEP) are integral parts of the curriculum.

Agriculture Mechanics 3-4: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Certifications offered: OSHA 10 General: Agriculture and iCEV, Southwest Professional Communications Certification. (Prerequisite: Agriculture Mechanics 1/2) Credits: 10. This course provides students in agriculture an opportunity to reinforce and extend understanding of applied mechanical applications. Students will be exposed to mechanical, electrical and thermal power that are associated with the field of agricultural welding. Applied activities develop an understanding and skill development in metal joining and fabrication processes. Instruction will prepare students to select, operate, repair, fabricate and maintain a variety of agricultural machinery and equipment. Processes covered may include Oxyfuel Cutting/Heating/Welding, Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Flux-cored Arc Welding (FCAW), Gas Tungsten Arc Welding (GTAW), Air-carbon Arc Cutting, Plasma Arc Cutting, Safety and Metal Fabrication. In addition, record keeping, communication skills, employability and human relation skills will be covered. Leadership development and Supervised Agricultural Experiences (SAE’s) are also integral to this course.

Animal Care: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 10 Certifications offered: iCEV Elanco Fundamentals of Animal Science Certification. This course provides students with training and skills for jobs related to livestock production and marketing. Course will include 60 hours of group instruction with a minimum of one hour each calendar week. Group instruction may include field trips and teacher supervised activity at the school farms and/or county fair.

Veterinary Science: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective or biological science. (Prerequisite: Animal Care 1/2) Credits: 10. Certifications offered: iCEV Elanco Fundamentals of Animal Science Certification, Elanco Veterinary Medical Applications. This is a hands-on science and lab-based course in which students learn about small animal care, small animal body systems, and veterinary clinical practices amongst other areas. Students will also be able to experience hands-on activities at the school farm as well as during classroom labs.

Art History of Floral Design: This course is UC “F” (visual and performing arts) approved and meets one of the following graduation requirements: vocational education or elective or visual performing arts. Certifications offered: iCEV, Benz School of Floral Design. Credits: 10 Provides an introduction to artistic and creative perception including aesthetic valuing through a series of projects in various media including tempera, pencil, flower, tile and a variety of papers. Students are also introduced to the elements and principles of visual art design such as line, shape/form, color, balance, and emphasis using a series of floral-based projects to explore the connections, relations, and application to visual arts design.

Agriculture Business Floral Design: This course is UC “F” (visual and performing arts) approved and meets one of the following graduation requirements: vocational education or elective or VAPA. Certifications offered: iCEV: Center for Financial responsibility personal financial literacy certification Center for Financial Responsibility Personal Financial Literacy. (Prerequisite: Art History of Floral Design) Credits: 10 Teaches students how to make corsages and floral arrangements, including bridal bouquets and other specialty items. Growth and maintenance of ornamental flowers under greenhouse conditions will also be introduced.

Environmental Horticulture: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 10. Certifications offered: BASF Plant Science certification, Bentz School of Floral Design principles of floral design certification. In this class, emphasis is placed on introductory studies in the horticulture industry, plant growth and development, equipment and uses, soils and plant nutrition, propagation methods, garden preparation, and methods of special ornamental and garden plant production. Students receive practical skills training through laboratory and class cooperative activities conducted in the greenhouse facilities.

Hydrology, Landscape and Sustainable Environmental Design: This course is UC “F” (visual and performing arts) approved and meets one of the following graduation requirements: vocational education or elective VAPA. (Prerequisite: Environmental Horticulture) Credits: 10. The class will serve as the capstone course in the environmental horticultural pathway. The course covers all aspects of environmentally sound landscape design. Students will develop an awareness of current environmental issues and determine how best to approach various issues, depending on regions and territories. Other instructional objectives include the history of landscape architecture, technical drafting, and computer design.

Biology and Sustainable Agriculture: This course meets University of California “D” Science Requirement. This course fulfills one of the following graduation requirements: biological science, Vocational Education, Elective. Credits: 10. Biology and Sustainable Agriculture is a one-year course designed to integrate biological science practices and knowledge into the practice of sustainable agriculture. The course is organized into four major sections, or units, each with a guiding question. Unit one addresses the question, What is sustainable agriculture? Unit two, sustainable agriculture fit into our environment? Unit three, What molecular biology principles guide sustainable agriculture? Unit four, How do we make decisions to maximize sustainable agricultural practices within a functioning ecosystem? Within each unit specific life science, principles will be identified with agricultural principles and practices guiding the acquisition of this knowledge, culminating in the development of a sustainable farm model and portfolio of supporting student research. National FFA Organization and Supervised Agricultural Experience Program (SAE) are integral parts of the curriculum. *Students will be expected to complete 2 hours of work outside of class time for each hour of instruction

Chemistry and Agriscience: This course meets University of California “D” Science Requirement. This course fulfills one of the following graduation requirements: physical science or elective). Credits: 10. Certifications offered: BASF Plant Science certification. This lab-based course is aligned to the California Content Standards for Chemistry and will include an agricultural component. 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 the properties of soil and land and their connections to plant and animal production. Students will develop an Agriscience research project in which each student will investigate a scientific question related to the course content, conducting an experiment to test the hypothesis, collecting quantitative data, and forming a conclusion based on analysis of the data. Students will develop and present a capstone soil management plan for agricultural producers. Throughout the course, students will be graded on participation in intracurricular FFA activities as well as the development and maintenance of an ongoing Supervised Agricultural Experience (SAE) program. National FFA Organization and Supervised Agricultural Experience Program (SAE) are integral parts of the curriculum.

Advanced Interdisciplinary Science for Sustainable Agriculture - Honors: This course meets University of California “D” Science Requirement. This course fulfills one of the following graduation requirements: biological science, vocational education or elective) Credits: 10. This 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.

Additionally, students will connect the products created in this class with industry activities to link real-world encounters and implement skills demanded by both colleges and careers. The course culminates with an agriscience experimental research project in which students design and conduct an experiment to solve a relevant issue. Final projects will be eligible for the Career Development Event competition at FFA events. Throughout the course, students will be graded on participation in intracurricular FFA activities as well as the development and maintenance of an ongoing Supervised Agricultural Experience (SAE) program. Final projects will be eligible for the Career Development Event competition at FFA events. Throughout the course, students will be graded on participation in intracurricular FFA activities as well as the development and maintenance of an ongoing Supervised Agricultural Experience (SAE) program.

Agricultural Technology and Seed Science: This course is UC “D” approved and meets one of the following graduation requirements: biological science or physical science or VAPA or vocational education or elective. Certifications offered: iCEV. Credits: 10. The success of the agricultural industry depends on good quality seed. The progress in agriculture depends upon production and marketing of good, quality seed of high yielding varieties. This course is the first course in this pathway that involves seed production and technology. Seed technology is the science of dealing with the methods of improving physical and genetic characteristics of seed. It involves such activities as variety development, evolution and release of varieties, seed production, seed processing, and certification and storage. This is an interdisciplinary science course that includes classifying seeds by groupings of seed type and formation, demonstrating the events of seed germination, summarizing the physiological and biochemical aspects to break seed dormancy, reading articles to become familiar with the latest discoveries and research in seed science and technology, and analyze the biological changes in seed quality during production, processing, and storage.

Principles of Plant Genetics and Breeding (Advanced Seed Science and Research): This course is UC “D” approved and meets one of the following graduation requirements: biological or physical science or vocational education or elective. This course will offer job shadowing and leadership opportunities. (Prerequisite: Agricultural Technology and Seed Science) Credits: 10. This course is the second of two consecutive courses in the pathway. This course is designed for students who would like to further enhance their knowledge about agricultural technology and seed science. The Advanced Seed Science and Research course deals with the principles of plant breeding, including the science of how traits are passed from one generation to the next by predicting phenotypes and genotypes of offspring and their parents; marker assisted plant selection, including the use of deoxyribonucleic acid (DNA) markers in marker-assisted selection (MAS) breeding and mutation breeding, including the study of changes at the DNA level.

ARTS, MEDIA AND ENTERTAINMENT SECTOR

Arts, Media and Entertainment Sector				
Course Sequence	Digital Media Arts Academy	Design, Visual and Media Arts Pathway	Graphic Design Pathway	Game Design and Integration Pathway
Introductory Course	Art in the Digital Age			
Concentrator Course	TV Media Production	TV Media Production	Art in the Digital Age	Computer Game/Design/Animation
Capstone Course	Cinema Arts & Production	Cinema Arts & Production	Graphic Design	Advanced Game Design

Sector description: The Arts, Media and Entertainment Sector Pathways are designed to prepare students for entry level positions as design associates, crafters, junior video editors, production artists, three-dimensional (3D) technical artist associates or related fields. Students develop skills in digital imagery, communication, video and film production, film preparation, computer graphic design, publishing, and video game design. For more information visit:

www.salinahsd.org/rop

Art in the Digital Age: This course is UC “F” (visual and performing arts) approved. The course complies with one of the following graduation requirements: vocational education or elective or visual performing arts Credits: 10. This course starts by exploring the invention of photography starting with the Digital Single Lens Reflex (DSLR) camera Adobe Lightroom CC and Adobe PhotoShop CC. As the next step, the course continues to explore how these advancements changed history, culture, the arts and communication. Students will learn how to become a Professional Photographer from both visual interpretation of images and on all manual settings on DSLR cameras. Visual interpretation along with critical thinking is implemented in cross-curricular projects. The role of contemporary technology in the global market will be connected to commercial applications, trends in contemporary art as a result of technological advancements, and the role of the artist in today’s society. The projects produced will have practical connections to real world relationships in the technological and commercial art fields allowing the students to see clear attainable pathways to career and/or college success. Students will learn about stop-motion animation video with a mixture of Photography and Video Editing. Students will also mix their own soundtracks using Adobe Audition and Apple Logic Pro X.

TV Media Production: This course is UC “F” (visual and performing arts) approved. The course fulfills one of the following graduation requirements: vocational education or elective or VAPA Credits: 10. This course is a foundation course for students interested in video arts. Students learn technical and artistic aspects of video production as well as film history, theory, analysis and preparation. Students learn to use digital video cameras. They also learn to use software programs such as Final Cut Pro X, Compressor, Motion, Logic Pro, Mainstage, Adobe Premiere, Adobe Media Encoder, Audition, Adobe Photoshop, Adobe Lightroom, Adobe SpeedGrade, Adobe After Effects, and Microsoft Office to film, edit, and create sound and music for their videos. Students will be required to develop four main video projects by working collaboratively in small production teams.

Cinema Arts & Production: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective or VAPA. Articulated with Hartnell College TAC 54 course. Certifications offered: Precision Exams Television Broadcasting. (Prerequisite: TV Media Production) Credits: 10. This class is a foundation course for students interested in video and film production. Students will learn technical and industry aspects of video and film production as well as the following aspects of working with film: history, theory, analysis, aesthetics, artistry and appreciation. Using professional digital cameras, students will film, edit, and provide sound to make their own videos. Students will learn the aspects of pre-production, production, and postproduction. They will learn all major aspects of videography, lighting, and audio, as well as the art of directing. Students will also gain a historical perspective of the film industry and how advances in technology have changed the way, films are made. Students will edit videos using Adobe Premiere CC, Adobe After Effects CC, Adobe Media Encoder, Adobe Audition CC and other Adobe and Apple Professional Applications. Students will also mix their own soundtracks using Adobe Audition. Students are provided with the opportunity to participate in actual television programs. Students will prepare an ePortfolio for their work.

Graphic Design: This course is UC “F” (visual and performing arts) approved and meets one of the following graduation requirements: vocational education or elective or VAPA. (Prerequisite: Art in the Digital Age) Credits: 10. Students learn computerized special effects, make professional posters, publish a newsletter, create exciting computerized presentations, and make their own advertising video. Students will also learn computer graphic design, animation, and make a digital portfolio in the form of a published website.

Computer Game/Design/Animation: This course is UC “F” (visual and performing arts) approved and meets one of the following graduation requirements: vocational education or elective, or VAPA. Credits: 10. The success of a video game depends on good quality video game design. This course engages students in the basic process of using technology to design video games. It involves learning about the history of video games, the design process, visual

communication, graphic design, three-dimensional (3D) modeling, storyboarding, games genres, the creation of design documents, game engine integration, basic concepts of gameplay and computer programming.

Advanced Game Design: This course is UC “F” (visual and performing arts) approved and meets one of the following graduation requirements: vocational education or elective or VAPA (Prerequisite: Game Design) Credits: 10. This course deals with the advanced process necessary to complete the design of a complex video game. Students will review the design process and will learn about advanced visual communication and graphic design, enhanced 3D modeling, in depth storyboarding and design document creation, various methods of character design, game engine integration, concepts of gameplay, advanced computer programming, dimensional form analysis and sound authoring.

BUILDING AND CONSTRUCTION TRADES SECTOR

Building and Construction Trades Sector			
Course Sequence	Cabinetry, Millwork and Woodworking Pathway	Green Construction Academy	
Introductory Course		Pre-Engineering	Construction Technology 1-2
Pre-Concentrator Course		Construction Technology 3-4	Construction Technology 3-4
Concentrator Course	Construction Technology 1-2	Mill Cabinet Construction	Mill Cabinet Construction
Capstone Course	Construction Technology 3-4	Multi Craft Core Construction	Multi Core Craft Construction
<p>Sector description: The Construction technology and Green Construction Academy Pathways are designed to prepare students for entry level positions as mechanical helper, carpenter apprentice, cabinet maker and installer or woodworker or related fields. Students study topics like robotics, electronics, manufacturing processes, pneumatics, mechanisms, and computer design technologies. Students develop skills in planning, designing, layout, estimating, problem solving, fabrication of wood products, use of simple jigs and fixtures, cabinetmaking and furniture making, nomenclature and advanced operational techniques of woodworking and cabinet shop equipment, creating blueprints, project packets, and student-centered construction projects. These topics and skills are all necessary for entry level positions in the above mentioned employment fields. For more information visit: www.salinasuhsd.org/rop</p>			

Pre-Engineering: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 10. This course is designed to generate an interest in careers in engineering and related fields. Students are exposed to the associated technologies through hands-on instruction and problem-solving activities. Scientific principles, mathematical concepts, and communication skills are taught through an activity-oriented approach. Robotics, electronics, manufacturing processes, pneumatics, mechanisms, and computer design technologies will be explored by students. Student teams will progress through an articulated modular instructional system.

Construction Technology 1-2: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 10. Certifications offered: OSHA 10

General Construction. This course is open to all beginning students interested in the wood products pathway. The students will use a variety of woodworking tools to produce useful wood products. All machines will be introduced by teacher demonstrations, multimedia presentations and related student readings. Students will gain experience in planning, designing, layout, estimating, problem solving, and fabrication of wood products. The safe and correct use of tools, machines, and materials will be stressed at all times. Students will apply academic concepts in English, mathematics and science. Emphasis will also be placed upon the students sharing responsibilities with the teacher for the maintenance and management of the shop facilities.

Construction Technology 3-4: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. (Prerequisite: Construction Technology 1/2) Credits: 10. Certifications offered: OSHA 10 General Construction. Construction Technology 3-4 is the advanced course of this pathway. This course will study advanced phases of wood products, including furniture, and basic cabinet construction and sustainable building techniques. Students will learn advanced operational techniques of portable and stationary woodworking equipment, and the use of simple jigs and fixtures. This course is designed for students preparing for postsecondary and technical education in the construction and engineering fields. Students will apply academic concepts in English, math and science to their woodworking projects.

Mill Cabinet Construction: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. (Prerequisite: Pre-Engineering) Credits: 10. Through a series of individual and group experiences, this course is designed to instruct students in the advanced phases of cabinetmaking and furniture making, nomenclature and advanced operational techniques of woodworking and cabinet shop equipment. Students will receive instruction in furniture making, cabinetry, wood and wood by-products and materials used in the construction of furniture. Students will practice communication skills by applying reading, writing, listening, speaking, visual and nonverbal skills. Methods used in achieving the course objectives include lecture on the course as outlined, exams and reading assignments, demonstrations and laboratory projects. Methods of evaluating objectives or outcomes include examinations, review of evaluations, a project, a final examination and participation and attendance. Required materials include a notebook, shop coat or apron, tape measure and pencil.

Multi Craft Core Construction: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Certifications offered: Occupational Safety and Health Administration (OSHA) 10 Hour Safety, Building Trades Pre-Apprenticeship Program. (Prerequisite: Mill Cabinet Construction) Credits: 10. 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 scaled structures that meet current code requirements. In addition, students will make real-world connections between the field of construction, math, and English using written projects, construction documents that include creating blueprints, project packets, and student-centered construction projects. This course provides students the opportunity to apply academic knowledge and technical skills through a hands-on curriculum that meets pre-apprenticeship requirements for the National Building Trades Council (NBTC).

BUSINESS AND FINANCE SECTOR

Business and Finance Sector	
Course Sequence	Business Management Pathway
Concentrator Course	Business Technology 1-2
Capstone Course	Computer Business Applications

Sector description: The Business Management Pathway is designed to prepare students for entry level positions as account clerk, office technician, computer operator and Information Technology (IT) trainee or related fields. Students study topics such as word processing, spreadsheets, databases, desktop publishing, presentation software, touch typing using the standard computer or typewriter (QWERTY) keyboard system, Microsoft Office Suite, basic Science, Technology, Engineering and Mathematics (STEM) skills, Hypertext Markup Language (HTML) programming, and computer literacy. The aforementioned topics are all necessary for entry level positions in the above mentioned employment fields. For more information visit: www.salinasuhd.org/rop

Business Technology 1-2: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 10. Students will be able to understand the field of communications as applied to personal and professional situations, they will demonstrate competency by selecting and using appropriate forms of communication in a variety of situations. Students will be introduced to word processing, spreadsheets, databases, desktop publishing, presentation software, and graphics. Additionally, touch-typing using the standard computer or (QWERTY) keyboard system is reinforced. Importance will also be placed upon maintaining organization of assignments and management of electronic files. Students will understand professional and ethical behavior consistent with regulations and organizational norms. Students will compile employment readiness support documents which will include: a cover letter, a resume, references and a digital portfolio demonstrating a culmination of best coursework.

Computer Business Applications: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or VAPA or elective. (Prerequisite: Business Technology 1-2) Credits: 10. Develops skills in word processing, spreadsheet creation, presentation, and database development with industry standard computer applications. Teaches formatting and develops skills using Microsoft Office Suite, introduces STEM, Hypertext Markup Language (HTML) programming, graphics, and computer literacy. Students will compile employment readiness support documents, which will include a cover letter, a resume, references and a digital portfolio demonstrating a culmination of best coursework.

EDUCATION, CHILD DEVELOPMENT AND FAMILY SERVICES SECTOR

Education, Child Development and Family Services Sector		
Course Sequence	Child Development Pathway	Education Pathway
Concentrator Course	Child Development 1-2	Careers in Education 1-2
Capstone Course	Child Development 3-4	Careers in Education 3-4

Sector description: The Child Development and Education pathways are designed to prepare students for entry level positions as care associate, child care provider, nanny, sitter, teacher’s aide or related fields. Students study skills like responsibility, decision-making, communication, teamwork and management. Topics covered in this sector include creating a healthy and nurturing environment for children, basic academics, safety, human development and its implications in a classroom setting, principles of teaching and learning, principles of team building and creating a positive school climate, philosophies of education, leadership, and exceptional student issues. The aforementioned skills and topics are necessary for entry level positions in the above mentioned employment fields. For more information visit: www.salinasuhd.org/rop

Child Development 1/2: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 10. Students learn how to create a healthy, nurturing environment for children and become aware of the developmental stages they go through from conception to age five. Students study and apply the physical, social, emotional and intellectual needs of children as they work with preschoolers. Students plan and lead a variety of activities for young children. Responsibility, decision-making and management are job skills learned in this class. This is an introductory course for the future parent, teacher, health care provider, or psychologist.

Child Development 3/4: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. (Prerequisite: Child Development 1/2) Credits: 10. This course continues to focus on the emotional/psychological, cognitive and physical development of the child. Current theoretical and research perspectives are emphasized. Included is a historical and socio-cultural overview of child development. A multi-disciplinary approach requires students to produce essays, oral presentations, and projects.

Careers in Education 1/2: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 10. This entry level course is designed to provide students with knowledge of career opportunities in the field of teaching and educational professions. Students are trained based on career preparation standards, including basic academic, safety and communication skills. A portion of the class time will be spent in internships in a school setting allowing students to apply concepts, analyze real life situations, and reflect on their own teaching practice. All students are required to observe and/or participate in a variety of settings and classrooms at the primary, elementary and/or secondary levels. The course prepares students for college and university teacher training programs.

Careers in Education 3/4: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. (Prerequisite: Careers in Education 1/2) Credits: 10. Students continue to learn and be trained in theories of human development and the implications for a classroom, principles of teaching and learning, principles of team building and creating a positive school climate, philosophies of education and leadership, and exceptional student issues. Students continue to participate in internships in a school setting allowing them to apply concepts, analyze real life situations, and reflect on their own teaching practice. The course prepares students for college and university teacher training programs.

ENGINEERING AND ARCHITECTURE SECTOR

Engineering and Architecture Sector				
Course Sequence	Engineering Academy		Engineering Technology Pathways	
Concentrator Course	Pre-Engineering	Digital Electronics	Functional Design Through Algebra	Foundations of Technology and Engineering
Capstone Course	Principles of Engineering	Engineering Design and Development		Advanced Engineering and Technology
<p>Sector description: The Engineering and Architecture Sector pathways are designed to prepare students for entry level positions as field and tower technicians, soil inspectors, after school enrichment instructors, i Operating System (iOS) apprentices and in testing, heating, ventilation and air conditioning (HVAC) or related fields. Students study topics such as robotics, electronics, manufacturing processes, pneumatics, mechanisms, computer design technologies, energy and power, materials and structures,</p>				

automation, statistics, kinematics, design process, engineering standards, technical documentation and engineering design. Students develop skills in design, combinational and sequential logic, communication, teamwork, computer programming, and sketching techniques. Students utilize mathematical operations (mathematical equations, graphs, and algebraic relationships) to optimize the outcome of engineering challenges. Students apply their mathematical skills through a coding project using Science, Technology, Engineering, Arts and Mathematics (STEAM) kits. In addition, students employ valid and reliable research methods and apply appropriate academic and technical skills necessary for entry level positions in the above mentioned employment fields. For more information visit: www.salinasuhd.org/rop

Pre-Engineering: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 10. This course is a Project Lead the Way (PLTW) high school engineering course. This course is designed to generate an interest in engineering and related occupations as career goals and expose students to the associated technologies through hands-on instruction and problem-solving activities. Scientific principles, mathematical concepts, and communication skills are taught through an activity oriented approach. Robotics, electronics, manufacturing processes, pneumatics, mechanisms, and computer design technologies will be explored by students. Student teams will progress through an articulated modular instructional system.

Principles of Engineering: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. (Prerequisite: Introduction to Engineering Design) Credits: 10. This course is a Project Lead the Way (PLTW) high school engineering course. Designed for students who wish to explore a broad range of engineering topics including engineering achievements throughout history, career fields in engineering, mechanisms, energy and power, materials and structures, sketching techniques, automation, statistics, and kinematics. Students develop problem-solving skills as they complete research and design projects to create solutions to various engineering problems. Students document their work in the engineering notebook, and create a professional portfolio communicating their solutions and newly acquired skills to peers and members of the professional community.

Digital Electronics: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 10. This course is a Project Lead the Way (PLTW) high school engineering course. Digital electronics is the foundation of all modern electronic devices such as cellular phones, Moving Picture Experts Group Layer-3 (M-PEG 3 or MP3) players, laptop computers, digital cameras, high definition televisions. Students investigate the digital circuit design process to create circuits and present solutions that can improve people’s lives. The major focus of the Digital Electronics course is to expose students to the design process of combinational and sequential logic design, teamwork, communication methods, engineering standards and technical documentation.

Engineering Design and Development: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. (Prerequisite: Digital Electronics) Credits: 10. This course is a Project Lead the Way (PLTW) high school engineering course. It is an engineering research course in which students work in teams to design and develop an original solution to a valid open-ended technical problem by applying the engineering design process. The course applies and concurrently develops secondary level knowledge and skills in mathematics, science, and technology.

Functional Design Through Algebra: This course is UC “C” (college preparatory mathematics) approved and meets one of the following graduation requirements: vocational education or elective or high school math. Credits: 10. This University of California Curriculum Integration (UCCI) course engages students to discover the power of mathematical modeling. Through a variety of engineering design projects, students utilize mathematical operations to optimize the outcome of each challenge. Students will design parachutes, bungee jumps and boats. Students will document calculations, graphical relationships, sketches of prototypes and final designs in an engineering notebook that includes summaries of each project and ideas for future redesigns. By building understanding of mathematical equations, graphs, and algebraic relationships, students will see how mathematical understanding can verify optimal performance and design in a variety of applications.

Foundations of Technology and Engineering: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 10. This course is a Paxton-Patterson high school engineering course. This course provides a student experience that develops career ready practices in the context of project based learning. Areas of study include alternative energy, architectural design, biotechnology, communications technology, construction technology, digital electronics, environmental technology, manufacturing technology, materials science, robotics & automation, transportation technology. Students will work productively in teams, use technology to enhance productivity, plan education and career paths, utilize critical thinking, define problems and persevere in solving them, demonstrate creativity and innovation employ valid and reliable research methods and apply appropriate academic and technical skills.

Advanced Engineering and Technology: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. (Prerequisite: Foundations of Technology and Engineering) Credits: 10. This course is a Paxton-Patterson high school engineering course. It is designed for students who have passed the Foundations of Technology and Engineering course as it continues to develop career ready practices in the context of project based learning. Areas of study include architecture & construction, alternative energy & environment, Robotics, Manufacturing & Materials. Students will work productively in teams, use technology to enhance productivity, plan education and career paths, utilize critical thinking, define problems and persevere in solving them, demonstrate creativity and innovation, employ valid and reliable research methods, and apply appropriate academic & technical skills.

HEALTH SCIENCE AND MEDICAL TECHNOLOGY SECTOR

Health Science and Medical Technology Sector						
Course Sequence	Public and Community Health Pathways		Patient Care Pathway CPA		Fitness and Sports Training Academy (FAST)	Patient Care Pathway
Introductory Course					Intro to Sports Medicine	
Concentrator Course	Dental Careers 1	Health Occupations	Foundations of Nursing 1	Medical Assistant 1	Physical Therapist Aide 1-2	Sports Medicine Athletic 1/2
Capstone Course	Dental Careers 2	Physical Therapy Aide	Foundations of Nursing 2	Medical Assistant 2	Sports Medicine 1/2	Sports Medicine Athletic Trainer

Sector description: The Health Science and Medical Technology Sector pathways are designed to prepare students for entry level positions as a dental assistant in training, medical assistant, health aide or physical therapy aide or related fields. Students study skills as taking and recording of vital signs, processing and mounting radiographs, sterilizing instruments, dental terminology and basic laboratory procedures, front office procedures, patient intake process, electronic health record, clinical procedures, medication administration, diagnostic procedures; communication skills, ethics, legalities, nutrition, fitness, patient observation, environmental and patient safety, body mechanics, patient interaction skills, minor physical therapy exercise, legal

liability in the health field and insurance, care and prevention of athletic injuries, investigation, experimentation, data collection and data analysis, all necessary for entry level positions in dental assisting, medical assisting, nursing, physical therapy, sports medicine fields. For more information visit: www.salinasuhd.org/rop

Dental Careers 1: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 10. The dental assistant is a valuable member of the dental health team who performs many essential duties in the dental office. These duties may include preparing the patient for treatment, assisting the dentist in all procedures, recording of vital signs, processing and mounting radiographs, sterilizing instruments, dental terminology and basic laboratory procedures. The dental assistant may also assist in the front office by making appointments for patients, confirming appointments, and helping with other office records. All instruction is geared to chairside assisting, providing patient care, and related duties with minimal training in front office skills. Students learn specific dental competencies, like the science of dentistry, oral health, infection prevention, occupational health, patient information and radiographic imaging. Students will have an opportunity to job-shadow in a local dental office.

Dental Careers 2: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Certifications offered: First Aid, cardiopulmonary resuscitation (CPR), Dental Radiology. (Prerequisite: Dental Careers 1) Credits: 10. Students continue to learn specific dental competencies, like dental materials, assisting in dental care and dental administration and communication skills. Students will have an opportunity to job-shadow in a local dental office.

Medical Assistant 1: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 10. Upon completion of this course, students will be prepared for successful employment as a medical assistant in a back office setting or other related position through the medical office internship that students complete. Students also continue to aim for higher education towards pre-med, physician assistant, or any other medical career interest. Students will be exposed to both employment skills and critical thinking skills to develop the ability to adapt to the rapidly changing technological and social components of the workplace. Students will learn skills related to the patient intake process through the patients' check out, especially the clinical elements that are involved. Example skills learned are therapeutic communication, ethics, administrative procedures and medical billing and coding. Students participate in job shadowing at local clinics.

Medical Assistant 2: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Certifications offered: First Aid, cardiopulmonary resuscitation (CPR), Bloodborne Pathogens, Health Insurance Portability and Accountability Act (HIPAA), NMAC through AMCA. (Prerequisite: Medical Assistant 1) Credits: 10. Students continue to learn and be trained in skills like hands-on operation of electronic health record, body systems, their structure and function, clinical procedures, medication administration, diagnostic procedures and are prepared for the National Medical Assistant Certification (NMAC) through American Medical Certification Association (AMCA). Students participate in job shadowing at local clinics.

Foundations of Nursing 1: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 10. This course provides entry level training leading to nurse assistant and home health aide certification. Instruction covers basic nursing skills, ethics and safety, communication skills and body mechanics. Students participate in job shadowing at local nursing homes.

Foundations of Nursing 2: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Certifications offered: First Aid, cardiopulmonary resuscitation (CPR), iCEV: Southwest Professional Communications Certification. (Prerequisite: Foundations of Nursing 1) Credits: 10. Students continue to learn and be trained in skills like medical terminology, basic anatomy and physiology. Included are classroom, laboratory and clinical experiences. Upon successful completion of both, students are qualified to take the state written and clinical examinations. The home health aide portion of the course consists of 20 hours of theory and 20 hours of clinical work, covering the following topics: intro to aide & agency role, interpretation of medical and social needs of clients. Personal care services, nutrition, and

cleaning and care tasks in the home are covered as well as changing bed linen, preparing meals, assisting in and out of bed, bathing, dressing, and grooming. Students participate in job shadowing at local nursing homes.

Health Occupations: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Certifications offered: BLS -CPR and HeartsaverFirst Aid Training and OSHA. Credits: 10. Prepares students for employment opportunities in the areas of diagnostic, supportive and therapeutic health services. Students will learn communication skills, ethics, legalities, medical terminology, anatomy, physiology, vital signs, nutrition, body mechanics, patient observation, environmental and patient safety, and weights and measures. Students participate in job shadowing at local hospitals.

Physical Therapy Aide: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Certifications offered: First Aid, CPR, iCEV: Southwest Professional Communications Certification. (Prerequisite:Health Occupations) Credits: 10. Prepares students in the necessary skills for assisting patients with their physical therapy program. Students will learn about anatomy and physiology, body positioning, body mechanics, vital signs, reporting, charting, communication skills, patient interaction skills, and how to apply minor physical therapy exercise in order to assist in the rehabilitation of the patient. Employment opportunities may be found in hospitals, clinics, chiropractic offices, and convalescent care agencies. Students are offered the opportunity to job shadow at local rehabilitation centers.

Intro to Sports Medicine: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 10. Focus is to introduce pathway students to various allied health careers, including Emergency Medical Technician (EMT) and Paramedic. The students will obtain the knowledge of college degrees and the path that best suits them for their potential career choice. They will learn basic concepts of organization and administration as well as concepts of legal liability in the health field and insurance. Lastly, they will get an introduction of the basic concepts of rehabilitation.

Physical Therapist Aide 1/2: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. (Prerequisite: Introduction to Sports Medicine) Credits: 10. Prepares pathway students in the necessary skills for assisting patients with their physical therapy program. Students will learn about anatomy and physiology, body positioning, body mechanics, vital signs, reporting, charting, communication skills, patient interaction skills, and how to apply minor physical therapy exercise in order to assist in the rehabilitation of the patient. Employment opportunities may be found in hospitals, clinics, chiropractic offices, and convalescent care agencies.

Sports Medicine 1/2: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Certifications offered: First Aid, cardiopulmonary resuscitation (CPR), Bloodborne Pathogens, Health Insurance Portability and Accountability Act (HIPAA). (Prerequisite: Physical Therapist Aide 1/2) Credits: 10. Provides pathway students with skills, knowledge, and experience in the areas of physical therapy, athletic training, nutrition, and fitness. Will focus on anatomy and physiology of various muscle groups, the skeletal system, theory of exercise, care and prevention of athletic injuries, rehabilitation, training room organization and skills.

Sports Medicine Athletic 1/2: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 10. Provides students with skills, knowledge, and experience in the areas of athletic physical therapy, training, nutrition, and fitness. Will focus on athletic perspective of anatomy and physiology of various muscle groups, the skeletal system, theory of exercise, care and prevention of athletic injuries, rehabilitation, training room organization and skills.

Sports Medicine Athletic Trainer: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Certifications offered: First Aid, cardiopulmonary resuscitation (CPR). (Prerequisite: Sports Medicine Athletic 1/2) Credits: 10. Students will learn about the anatomy and physiology of systems, theories and methods for prevention, evaluation, management and rehabilitation of the body's chemical response to pharmaceutical agents, disease, injury and stress will be pods of observation. Investigation, experimentation, data collection and data analysis will also be studied. Students are

provided Work Based Learning (WBL) opportunities while working with school athletes, athletic trainers and other practicing.

HOSPITALITY, TOURISM AND RECREATION SECTOR

Hospitality, Tourism and Recreation Sector			
Course Sequence	Food Science and Nutrition Pathway	Food Service and Hospitality Pathways	
Concentrator Course	Advanced Culinary Food Science 1	Culinary 1/2	Restaurant Careers 1
Capstone Course	Advanced Culinary Food Science 2	Culinary 3/4	Restaurant Careers 2

Sector description: The Hospitality, Tourism and Recreation Sector Pathways are designed to prepare students for entry level positions as cook, restaurant server and food service assistant or related fields. Students study skills as short order cooking and dining room service, preparing food including safety, sanitation, time and equipment management, safe practices, principles of cooking, various cooking recipes, professionalism, food safety, sanitation, buffet presentation, plate presentation and menu planning, proper hygiene and acceptable attire, proper cleaning procedures and methods of cooking, portion control in recipes, preparation of soups, salads, sandwiches, entrees, baked goods and beverages, techniques used in the hospitality industry, functions of the commercial kitchen and principles of nutrition according to the United States Department of Agriculture (USDA) food pyramid, all necessary for entry level positions in culinary and restaurant careers fields. For more information visit: www.salinasuhd.org/rop

Advanced Culinary Food Science 1: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 10. This course is designed to prepare students for occupations in the culinary arts and hospitality industry. Learning includes both classroom and laboratory work. The classroom work is designed to teach the core curriculum as well as basic techniques used in the hospitality industry. The lab work is used to teach functions of the commercial kitchen, short order cooking and dining room service. Students will prepare food for advisory meetings, staff and catering jobs. Students may also participate in SkillsUSA and/or other food competitions.

Advanced Culinary Food Science 2: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Certifications offered ServSafe: Food Handler. (Prerequisite: Advanced Culinary Food Science 1) Credits: 10. This course continues to prepare students for occupations in the culinary arts and hospitality industry. Learning includes both classroom and laboratory work. The classroom work is designed to teach the core curriculum as well as advanced techniques used in the hospitality industry. The lab work is used to teach functions of the commercial kitchen, short order cooking and dining room service. Students will prepare food for advisory meetings, staff and local catering for school events. Students may also participate in SkillsUSA and/or other food competitions.

Culinary 1/2: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 10. Students learn to cook and serve a variety of foods and simple meals in a small group and find out how to make healthy food choices by applying nutrition basics, understanding food labels, and shopping wisely. Students will become skilled in the basic techniques necessary for preparing food including safety, sanitation, time and equipment management. These basic skills are necessary for careers in the food service industry.

Culinary 3/4 (Advanced Culinary): This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Certifications offered: ServSafe: Food Handler. (Prerequisite: Culinary 1/2) Credits: 10. Students learn specific culinary, food service, food safety, sanitation and nutrition competencies, like safe practices, principles of cooking, various cooking recipes, professionalism, food safety, sanitation, buffet presentation, plate presentation and menu planning.

Restaurant Careers 1: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 10. This course provides hands-on training and experience in entry-level food service through the on-site restaurant classroom. Students learn food service competencies, like knowledge of safe practices, proper food handling and storage, proper hygiene and acceptable attire, proper cleaning procedures and methods of cooking. Students also learn personal, interpersonal, thinking and problem solving and communication skills.

Restaurant Careers 2: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Certifications offered: ServSafe: Food Handler. (Prerequisite: Restaurant Careers 1) Credits: 10. This course continues to provide hands-on training and experience in entry-level food service through the on-site restaurant classroom. Students continue to learn specific food service competencies like portion control in recipes, prepare soups, salads, sandwiches, entrees, baked goods and beverages, and principles of nutrition according to the USDA food pyramid. Students also learn about employment awareness, entry level position duties and requirements and seeking and maintaining employment. Finally, students continue to learn personal, interpersonal, thinking and problem solving, communication skills, occupational safety, employment literacy and technology literacy.

INFORMATION AND COMMUNICATION TECHNOLOGY SECTOR

Information and Communication Technology Sector				
Course Sequence	Networking Pathway	Software and Systems Development Pathways		
Concentrator Course	Intro Network Cable 1/2	Introduction to Computer Science	Robotics Technology	Cybersecurity
Capstone Course	CISCO Advanced Networking	Computer Science 2	Robotics Engineering Technology	Advanced Cybersecurity
<p>Sector description: The Information and Communication Technology Sector Pathways are designed to prepare students for entry level positions as computer maintenance technician apprentice, Information Technology (IT) technician apprentice, robot service technician apprentice or related fields. Students study skills as development and use of algorithms, computer programming, computer hardware and software, operating systems, computer networking, robotic automation, engineering practices, Computer-Aided Design (CAD) & Computer-Aided Manufacturing (CAM) and science skills, all necessary for entry level positions in computer, Information Technology (IT) or robotic automation fields. For more information visit: www.salinasuhd.org/rop</p>				

Introduction to Computer Science: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 10. This course emphasizes the teaching of logic, design, and developing an understanding of basic programming. Students will learn about such topics as writing programs to perform simple tasks, learning basic animation and application development, and will cover such topics as Hypertext Markup Language (HTML), Javascript, and/or Python and the use of graphical interfaces. There are no prerequisites for this course, and no coding or programming experience is required. Embedded

throughout the course are explorations into computer-using careers and ethical and social issues related to computers in the world today.

Computer Science 2: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. (Prerequisite: Introduction to Computer Science) Credits: 10. The course continues to build students’ computer science technical expertise. Students will design, implement and analyze solutions to problems through the development and use of algorithms, data structures and object-oriented programming. Students will be able to write, run, test and debug solutions in the JAVA programming language, utilizing standard JAVA library classes and interfaces from the AP JAVA subset. In addition, students will be able to read and understand programs consisting of several classes and interacting objects and understand a description of the design and development process leading to such a program. Students will also learn about computer science careers and explore opportunities in the computer science industry.

Intro Network Cable 1/2 (CISCO Networking - IT Essentials): This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Certifications offered CompTIA IT Fundamentals +. Credits: 10. The Cisco® IT Essentials curriculum is designed for Cisco Networking Academy® students in upper secondary schools, technical schools, and colleges or universities who want to pursue careers in IT and learn how computers work, how to assemble computers, and how to troubleshoot hardware and software issues. The goal of this course is to introduce the student to computer hardware and software, as well as operating systems, networking concepts, mobile devices, IT security, and troubleshooting. The online course materials will assist the student in developing the skills necessary to work as a technician in the field of IT. This course prepares students for the CompTIA IT Fundamentals + certification. Articulated with Diablo Valley College CNT 104 course.

CISCO Advanced Networking (CISCO Networking - Introduction to Networks): This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. (Prerequisite: Introduction to Network Cable 1/2) Credits: 10. The Cisco Certified Network Associate (CCNA)® Routing and Switching curriculum is designed for students who are seeking entry-level jobs in the Information and Communication Technologies (ICT) industry and want to build a foundation for success in computer networking-related careers and degree programs. This course provides an integrated and comprehensive coverage of computer networking topics, from fundamentals to advanced applications and services, while providing opportunities for hands-on practical experience and career skills development. Students will be prepared to take the Cisco Certified Entry level Technician (CCENT)® certification exam after completing this course and the Routing and Switching course. Articulated with Diablo Valley College CNT 106 course.

Robotics Technology: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 10. This introductory level robotics course explores the relation between science and technology. The program is designed to enrich students' knowledge with the following fundamental topics: safety practices in the robotics laboratory, robotic automation in the manufacturing industry, the history and application of technology and engineering as it applies to robotics, engineering practices, robot energy sources, basic kinematics, dynamics, pneumatic and electricity principles, computer programming of robots in the C language, interfacing software and hardware. Basic tool usage is also studied (use proper tools, calipers, micrometers, understand properties of materials and assembly techniques). Lab experiments require groups of students to apply the learned concept by building and testing complex VEX based mobile robots. Students will work in small groups to design, build and program robotic devices that will be used in both school and regional competitions. Integrated in this course are career preparation standards, including basic academic, communication, problem solving and critical thinking skills as well as safety, technology and employment literacy.

Robotics Engineering Technology (II): This course is UC “D” (college preparatory laboratory science) approved and meets one of the following graduation requirements: vocational education or elective. Certifications offered: Autodesk Certified User (ACU). (Prerequisite: Robotics Technology) Credits: 10. The Robotics Course is designed to be a capstone applications course for robotics engineering students. It will build upon prior skills learned such as applied math & physical science techniques, Computer-Aided Design (CAD) & Computer-Aided Manufacturing (CAM) skills and other engineering fundamentals. New competencies will include programming techniques and applications including sensor feedback loops and control system design. Additionally, design of mechanical systems

powered by direct current (DC) motors, pneumatics and elastic potential energy will be integrated. Some specific topics covered will be mechanism design for manipulators and mobile robots, 3D graphic simulation, control design, actuators and sensors, task modeling, human-machine interface, and embedded software. Upon completion of the course, students will be able to solve electromechanical design problems with both human controlled and autonomous solutions. This course prepares students for Autodesk Inventor Certified User (ACU) certification.

Cybersecurity: This course is “G” (College preparatory Elective) approved and meets the following graduation requirement: vocational education or elective. Credits: 10. This concentrator course prepares students for the advanced cybersecurity course and certifications. Students will learn cybersecurity topics such as software security, networking, system administration, and the basics of cryptography and programming.

Advanced Cybersecurity: This course is “G” (College preparatory elective) approved and meets the following graduation requirement: vocational education or elective. Credits: 10. Course offers certifications related to this field of study. This course is the capstone course of the cybersecurity pathway and will cover advanced topics in the field of cybersecurity, including advanced cryptography, networking, risk assessment and cyber defense.

MANUFACTURING AND PRODUCT DEVELOPMENT SECTOR

Manufacturing and Product Development Sector			
Course Sequence	Welding and Materials Joining Pathway		Graphic Production Pathway
Introductory Course			Pre-Engineering
Concentrator Course	Industrial Welding and Metal Fabrication 1		Drafting Technology 1/2
Capstone Course	Industrial Welding and Metal Fabrication 2		Drafting Technology 3/4
<p>Sector description: Manufacturing and Product Development Sector courses are designed to prepare students for entry level positions as welding apprentices or industrial drafter trainees or related fields. Students study skills such as reading blueprints, cutting and welding metal, manufacturing processes, mechanisms, planning, preparation, interpreting and preparation of engineering and architectural drawings using drafting tools and Computer Aided Design (CAD) software, all necessary for entry level positions in welding or industrial drafting fields. For more information visit: www.salinasuhsd.org/rop</p>			

Industrial Welding and Metal Fabrication 1: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 10. Students learn to read blueprints, interpret welding symbols, cut metal and weld metal. Welding training is offered in shield metal (stick), mig, tig. Metal cutting training includes plasma arc cutting.

Industrial Welding and Metal Fabrication 2: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Certifications offered: Occupational Safety and Health Administration (OSHA) 10 Hour Safety. This course is articulated with Hartnell Community College for WLD 151. (Prerequisite: Industrial Welding and Metal Fabrication 1) Credits: 10. Students

continue to learn to read blueprints, interpret welding symbols, cut metal and weld metal. Welding and metal cutting training includes oxy/gas and plasma arc cutting.

Pre-Engineering: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 10. This course is designed to generate an interest in engineering and related occupations as career goals and expose students to the associated technologies through hands-on instruction and problem-solving activities. Scientific principles, mathematical concepts, and communication skills are taught through an activity oriented approach. Robotics, electronics, manufacturing processes, pneumatics, mechanisms, and computer design technologies will be explored by students. Student teams will progress through an articulated modular instructional system.

Drafting Technology 1-2: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective or VAPA. (Prerequisite: Pre-Engineering) Credits: 10. This program prepares individuals to plan, prepare, and interpret engineering and architectural drawings. Drafting prepares a student for occupations such as construction trades, architectural careers, engineer, interior design, and other technology based opportunities. Students will be given the opportunity to create engineering or architectural models through hands on activities.

Drafting Technology 3-4: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective or VAPA. (Prerequisite Drafting Technology 1/2) Credits: 10. This course instructs students on the identification of drafting terminology and symbols. Students will use drafting tools, computers and AutoCAD software to produce industrial drawings. Students will gain more experience in engineering drawings and architectural plans. Further emphasis will be given to Computer-Aided Design (CAD) & Computer-Aided Manufacturing (CAM) activities. Articulated with Hartnell College CMA 81 course. Certifications offered: Autodesk Certified User (ACU).

MARKETING SALES AND SERVICE SECTOR

Marketing Sales and Service Sector	
Course Sequence	Professional Sales Pathway
Concentrator Course	Retail Sales and Marketing
Capstone Course	Retail Co-Op
<p>Sector description: The Professional Sales Pathway is designed to prepare students for entry level positions as a sales assistant or related fields. Students study skills like sales, customer service, communications, telephone techniques, register operation, making change, and display basics, all necessary for entry level positions in general retail sales. For more information visit: www.salinasuhd.org/rop</p>	

Retail Sales and Marketing: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 20. This course trains students to meet entry-level requirements for jobs in general retail sales and related fields. Students will develop skills in the classroom setting, which will be applied in the practical setting of a work internship.

Retail Co-Op: This course meets one of the following graduation requirements: vocational education or elective or VAPA. (Prerequisite: Retail Sales & Marketing) Credits: 20. Provides a unique combination of related classroom

instruction and “on-the-job” training. For students 16 years or older who are working in one of the above areas and would like to earn up to 10 credits for the semester. All students must attend one class per week.

PUBLIC SERVICES SECTOR

Public Services Sector			
Course Sequence	Emergency Response Pathways		Public Safety Pathway
Concentrator Course	Emergency Medical Response (EMR)	Intro to Firefighter	Naval Science 3
Capstone Course	Emergency Medical Technician (EMT)	Fire Science Technology	Naval Science 4
<p>Sector description: The Emergency Response Pathways are designed to prepare students for entry level positions as a firefighter recruit, dispatcher, etc. Students study EMT/EMR and firefighting practices. The Public Safety Pathway prepares students for careers in public and military service. For more information visit: www.salinasuhd.org/rop</p>			

Emergency Medical Response (EMR): his course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Certifications offered: First Aid, CPR. Credits: 10. Students will be introduced to all the major areas of study in emergency medical service systems from the perspective of an Emergency Medical Responder (EMR) and will include specifically anatomy and physiology of the human body, EMR principles of emergency medical and trauma care, safety precautions and special considerations for working in the prehospital setting.

Emergency Medical Technician (EMT): This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Certifications offered: First Aid, CPR, skills training for EMT certification. (Prerequisite: EMR) Credits: 10. This course prepares students to take and pass the State of California EMT certification test. Students will learn all phases of basic life support and emergency medical services.

Intro to Firefighter: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Certifications offered: First Aid, CPR. Credits: 10. Prepares students to pursue a career as a firefighter. Students will learn many day-to-day aspects of routine firefighter duties.

Fire Science Technology: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Certifications offered: First Aid, CPR, ISC-100, ICS-200, S-190 and OSHA General Safety (Prerequisite: Intro to Firefighter) Credits: 10. Students will learn basic firefighter theory and skills. Topics covered will include fire science, agency organization, regulations, and functions, firefighter safety, characteristics and behavior of fire and fire prevention and control.

Naval Science 3, 4 (NJROTC): These course are UC “G” (college preparatory elective) approved and meet one of the following graduation requirements: vocational education or elective. The program teaches students self-discipline and self-reliance, enhances students’ abilities to work cooperatively, and fosters students’ abilities to plan their futures. There is no requirement for students to commit to a career in the Navy after high school to be a part of the program. Naval Science covers maritime history, introduction to leadership, geography, sea power, health, first aid, and more. Instructors are retired Navy officers and enlisted personnel. Participation in the program will include many volunteer opportunities, and additional access to the Service Academies and to College ROTC programs. Credits: 10/20.

TRANSPORTATION SECTOR

Transportation Sector			
Course Sequence		Systems Diagnostics, Service and Repair Pathways	
Concentrator Course		Engine Maintenance and Repair 1	Auto Service 1
Capstone Course		Engine Maintenance and Repair 2	Auto Service 2

Sector description: The Engine Maintenance and Repair and Auto Service Pathways are designed to prepare students for entry level positions as a mechanic’s assistant or related fields. Students study shop safety, the use of basic hand tools, select, store and apply fuels and lubricants, engine and automotive maintenance, service and repair. For more information visit: www.salinasuhd.org/rop

Engine Maintenance and Repair 1: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Certifications offered: Occupational Safety and Health Administration (OSHA) 10 Hour Safety Automotive, NC3 Kubota Pre-Delivery Inspection (PDI) & Assembly, Preventative Maintenance Inspection, Maintenance Procedures, Electrical, Hydraulics, Engine, Powertrain and Brakes, Steering, Suspension (BSS); NC3 Snap-On Wheel Service and Alignment, Rotor Matching Master Technician and Tire Pressure Monitor. Credits: 10. Students will learn job search skills, use basic hand tools, shop safety, start and stop gasoline and diesel engines, maintenance skills, minor repairs, select, store and apply fuels and lubricants, and perform maintenance tasks.

Engine Maintenance and Repair 2: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Certifications offered: Occupational Safety and Health Administration (OSHA) 10 Hour Safety Automotive, OSHA Forklift, NC3 Snap-On Automotive Scanner Diagnostics, Battery Starting and Charging, Diesel Scanner Diagnostics. (Prerequisite: Engine Maintenance and Repair 1) Credits: 10. Students will learn engine performance, identify the parts of the engine, troubleshoot the engine, computer control system, electrical repairs, steering repairs and general lubrication services for 2-stroke and 4-stroke small engines, identify the parts of the powertrain, and receive forklift training. Students will be able to safely diagnose, plan and implement solutions to complex engine problems. Students will be exposed to diesel engine mechanics.

Auto Service 1: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. Credits: 10. Certification offered: Occupational Safety and Health Administration (OSHA) 10 Hour Safety Automotive. Students are introduced to automobile service and repair, shop safety, engine repair, automatic transmissions and transaxles, manual drivetrain and axles, suspension and steering, brakes, electrical and electronic systems, heating and air conditioning, and engine performance. After completion of this course, students will be prepared for majors in automotive systems and repairs at college and for an entry level position in today’s automotive services industry.

Auto Service 2: This course is UC “G” (college preparatory elective) approved and meets one of the following graduation requirements: vocational education or elective. (Prerequisite: Auto Service 1) Credits: 10. Certifications offered: NC3 Snap-On Multimeter, Battery Starting & Charging, Tire Pressure Monitoring and Pro-Cut Car Brake Lathes. Students continue to learn about automobile service and repair, shop safety, engine repair, automatic transmissions and transaxles, manual drivetrain and axles, suspension and steering, brakes, electrical and electronic systems, heating and air conditioning, and engine performance. After completion of this course, students will be

prepared for postsecondary automotive education, an entry level position in today’s automotive services industry, including NC3 Snap-On Certifications. This course will also provide students with the opportunity to apply and extend concepts studied in their math and science classes (related to algebra, arithmetic, physics, and electrical, computer, and chemical sciences) to the automotive technology industry.

MULTI SECTOR

Multi Sector	
Course Sequence	CTE Work Experience Pathway
Concentrator Course	CTE Work Experience
Capstone Course	Advanced CTE Work Experience
<p>Sector description: The CTE Work Experience course sequence allows for students to earn graduation credits as they complete their CTE Pathway sequence and earn valuable work experience. For more information visit: www.salinasuhd.org/rop</p>	

CTE Work Experience: This course is an elective course for juniors and seniors that are enrolled in a CTE Pathway. Students are given the opportunity to earn elective credits while they work in jobs related to their CTE course of study. This course is recommended for students enrolled in a CTE pathway concentrator course. Meetings are held with the teacher to monitor skills learned on the job. Students will earn no more than 10 credits and parent permission is required.

Advanced CTE Work Experience: This course is an elective course for juniors and seniors that are enrolled in a CTE Pathway. Students are given the opportunity to earn elective credits while they work in jobs related to their CTE course of study. This course is recommended for students enrolled in a CTE pathway capstone course. Meetings are held with the teacher to monitor skills learned on the job. Students will earn no more than 10 credits and parent permission is required.

CTE ACRONYMS SECTION

CTE: Career and Technical Education

CTSO: Career and Technical Student Organizations that provide student's leadership and technical skills competitions:

Future Farmers of America (FFA) is the student leadership organization associated with Agriculture pathways. Historically FFA was Future Farmers of America. State website: <https://www.calaged.org/>

Family, Careers and Community Leaders of America (FCCLA) is the student leadership organization associated with Hospitality, Education and Child Development. <https://www.ca-fecla.org/>

SkillsUSA is the student leadership organization associated with multiple pathways, including Healthcare, Architecture, Engineering, Arts, Media/Entertainment and Information Technology pathways. <http://www.skillsusa.org/>

Health Occupations Students of America (HOSA) is the student leadership organization for the Patient and Medical Care Pathways. <https://www.cal-hosa.org/>.

Distributive Education Clubs of America (DECA) prepares emerging leaders and entrepreneurs in marketing, finance, hospitality and management. <https://www.californiadeca.org/>

Future Business Leaders of America (FBLA) is committed to preparing today's students for success in business leadership. <https://www.cafbla.org/>



Pathway: A series of an introductory, concentrator and capstone course from the same field that prepares students with a high technical and soft skills in the particular field of study.

Introductory course: A course that provides basic information for the concentrator course in the pathway.

Concentrator course: CTE course that provides industry pathway specific content skills leading to a single industry competency skill set.

Capstone course: The final course in a planned sequence of courses that provides a rigorous and intensive culmination of a course of study. Students that complete a sequence of concentrator and capstone courses are considered **completers** in that pathway.

IBC: Industry Based Certifications: Many pathways allow students to be certificated. See each pathway for details.

WBL: Defined by many different types of experiences depending on grade level and detailed below. Work based learning can refer to a job shadow, virtual job shadow, or internship. Here are the definitions of various types of WBL:

Job Shadow: Observational activity at the business or industry site.

Virtual Job Shadow: Virtual observational activity at the business or industry site.

Internship: A paid or unpaid supervised training experience through a CTE course.

Articulation: Articulation allows students enrolled in specific career and technical education (CTE) courses to seek college credit for work completed in high school. See each pathway for details. The majority of our articulation agreements are made with Hartnell College and some are made with Diablo Valley College.

A-G approved course: To be eligible to enter a four-year public college (either the California State University or University of California systems), students must meet a series of course requirements called A through G (A-G). They represent the basic level of academic preparation that high school students should achieve to undertake university work.