



Prepares Students for College and Careers

▲ Emergency Medical Careers

COURSE CODES:

▲ **ROP 67037** ▲ **WUHSD 0000** ▲ **ERUSD 0000** ▲ **STATE (CALPADS) 8421**

Industry Sector: Public Services	Course Leads to: Post-Secondary Education
Career Pathway: Emergency Response	Course Level: Concentrator
Classroom Hours: 180	
Work Based Learning: 180 (optional)	

Approved Textbook/Curriculum: *Diversified Health Occupations (DHO): Health Science, 8th ed. Kobelak, Sharon Simmers, Karen Simmers Nartker, and Louise Simmers, Cengage.*

POST-SECONDARY EDUCATION	INDUSTRY CERTIFICATIONS	EMPLOYMENT
Articulation with College No Dual Enrollment with College No UC Approved a-g elective credit No	NONE	Related Careers (O*NET) 29-2041.00 Emergency Medical Technicians and Paramedics 29-2071.00 Medical Records and Health Information Technicians 31-9092.00 Medical Assistants 29-2011.00 Medical and Clinical Laboratory Technologists 43-6013.00 Medical Secretaries 29-1141.00 Registered Nurses
COLLEGE MAJORS	NEXT STEPS	
Emergency Management/Homeland Security Emergency Medical Technology Nursing (RN) Practical Nursing Pre-Medicine Surgical Technology Firefighter	ROP Emergency Medical Responder Anatomy and Physiology Biomedical	

Prerequisites:
Appropriate for all grade levels.

Course Description:
Emergency Medical Careers is designed to give students an overview of the fields of EMR, EMT, and Paramedics. Students will gain strong foundational knowledge in body systems, anatomy, physiology, medical math, and terminology. Other topics covered include infection control, nutrition, legal and ethical principles, and safety/first aid. This is a required course that leads to Emergency Medical Responder Capstone Course.

Integrated throughout the course are standards for Career Ready Practice and Academic Content Standards which include: appropriate technical skills and academic knowledge; communication skills; career planning; applied technology; critical thinking and problem solving; personal health and financial literacy; citizenship, integrity, ethical leadership and effective management; work productively while integrating cultural and global competence; creativity and innovation; reliable research strategies, and environment, social and economic impacts of decisions.

TRI-CITIES ROP PATHWAYS

CTE Pathway Completion Certificate Eligibility:

- ▢ *Completion of 300+ hours of instruction in two or more CTE courses in the same industry sector*
- ▢ *Demonstrate competency in 75% + of the Essential Standards for each pathway course*
- ▢ *Maintain 75% + attendance in CTE pathway courses*
- ▢ *Complete a Work Based Learning activity (will be defined in the College and Career Indicator "CCI")*

CONC = Concentrator CAP = Capstone

SANTA FE HIGH SCHOOL

Site	Level	State Code	Dist. Code	ROP Code	ROP Course	District Title
INDUSTRY SECTOR: PUBLIC SERVICES – PATHWAY: EMERGENCY RESPONSE						
SFHS	CONC	8421			Emergency Medical Careers	
SFHS	CAP	8422	8049	63051	Emergency Medical Responder	

11 Key elements to a high quality CTE program

- *Leadership at all levels*
- *High-quality curriculum and instruction*
- *Career exploration and guidance*
- *Student support and student leadership development*
- *Industry partnerships*
- *System alignment and coherence*
- *Effective organizational design*
- *System responsiveness to changing economic demands*
- *Skilled faculty and professional development*
- *Evaluation, accountability, and continuous improvement*
- *CTE promotion, outreach, and communication*

COURSE OUTLINE

UNIT ONE

I. ORIENTATION

- A. Introduce course and facilities
- B. Discuss syllabus and major objectives
- C. Explain attendance, grading, classroom procedures, code of conduct
- D. Complete course safety requirements/test

II. CAREERS IN THE INDUSTRY

- A. Thoroughly investigate various occupations within the Public Services industry sectors.
- B. Discuss and research various occupations, including personal requirements, level of education and licensing requirements needed for employment
- C. Identify professional organizations
- D. Research salary and current labor market trends in healthcare and public service careers
- E. Identify essential personal characteristics of the healthcare worker (hair, jewelry, appearance, clothing, uniforms, shoes, nails, makeup)

III. PREPARING FOR COLLEGE AND CAREERS

- A. Review and Discuss California CTE Model Curriculum Standards for Career Ready Practice
- B. Create an Education Plan and a Career Plan aligned with personal goals
- C. Create a Resumé and practice a professional job interview
- D. Create a Career Portfolio
- E. Complete a handwritten/hand printed Job Application neatly, legibly and with no corrections or mistakes
- F. Evening of Excellence Essay

IV. HISTORY AND INTRODUCTION TO THE CAREER FIELD

- A. History of public services – milestones and advancements
- B. Discuss important discoveries in healthcare and its impact on societies, cultures, and people
- C. Describe various health care and public services facilities
- D. Explain the functions of specialty units
- E. Describe the “integrated systems approach” to healthcare delivery services (prevention, pathology, diagnosis, and treatment)
- F. Explore issues of global significance and discuss the impact on the healthcare industry
- G. Discuss cultural diversity in the industries and the importance of cultural sensitivity
- H. Discuss environmentally-sound practices and sustainability within the industry sectors

V. MEDICAL TERMINOLOGY

- A. Identify, define, and correctly pronounce common word parts, including prefixes, suffixes, and word roots
- B. Determine meaning of terms based on word parts
- C. Demonstrate proper use of a medical dictionary
- D. Identify anatomical descriptors and fundamental human body structures
- E. Identify common medical abbreviations used in the health care environment
- F. Build and analyze medical terms using word parts
- G. Identify selected body systems structures and their related word parts.
- H. Use system word parts, prefixes, and suffixes to build and define words
- I. Define medical terms related to selected diseases
- J. Define selected diagnostic and surgical procedural terms for each body system
- K. Recognize selected abbreviations related to each body system.

VI. ANATOMY AND PHYSIOLOGY

- A. Describe the organization of the human body
- B. Understand the body planes, directions, and cavities
- C. Describe the common disorders and diseases of the various human body systems

VII. HUMAN BODY SYSTEMS

- A. The musculoskeletal system
 - a. Demonstrate knowledge of the basic structure and function of the human musculoskeletal system
 - b. Describe the function of the skeletal system

COURSE OUTLINE

- c. Locate and describe the various joints and types of movement of the body
 - d. Define, locate, and explain of bone, cartilage, ligaments, and tendons
 - e. Locate and describe the various bones on the human body
 - f. Explain the anatomy and physiology of bone
- B. The integumentary system
- a. Demonstrate knowledge of the basic structure and function of the human integumentary system
 - b. Describe the major structures and functions of the integumentary system
 - c. List and describe the layers of skin
 - d. Explain the healing process of skin
 - e. Describe the structure and growth of hair and nails
 - f. Explain how the body regulates temperature through the integumentary system
 - g. Identify common pathological conditions as they affect the integumentary system
- C. The respiratory system
- a. Demonstrate knowledge of the basic structure and function of the human respiratory system
 - b. Identify and describe the components and basic function of the respiratory system
 - c. Explain how the respiratory system warms and humidifies the air
 - d. Describe the purpose and function of the mucociliary escalator
 - e. Locate and describe the various skeletal structures related to the respiratory system
 - f. Explain the process of gas exchange at the aveolar level
 - g. Identify common pathologic conditions as they affect the respiratory system
- D. The reproductive system
- a. Demonstrate knowledge of the basic structure and function of the human reproductive system
 - b. List major structures and functions of the human reproductive systems
 - c. Compare and contrast mitosis and meiosis
 - d. Identify, locate, and describe the function of the male and female reproductive organs
 - e. Discuss the phases if the menstrual cycle
 - f. Explain the effects of hormonal control on the male and female reproductive systems
 - g. Describe the phases of labor and delivery
 - h. Identify common pathologic conditions and sexually transmitted diseases
- E. The cardiovascular and lymphatic systems
- a. Demonstrate knowledge of the basic structure and function of the human cardiovascular and lymphatic system
 - b. Identify the components of the heart and describe the contractions of the heart and the conduction system
 - c. Explain coronary circulation
 - d. Compare and contrast arteries, vessels, and capillaries
 - e. Identify the major components of blood and trace the pathway of blood through the vessels to the heart
 - f. Identify, locate, and describe the major components of the lymphatic and immune system and their functions
 - g. Analyze, define, spell, and pronounce words related to clinical procedures with the cardiovascular and lymphatic systems
 - h. Identify and describe the functions of the blood cells responsible for protecting the body from invasion
 - i. Discuss how inflammatory responses and fevers relate to infection
 - j. Compare and contrast innate immunity to adaptive immunity
 - k. Describe the function of the lymphocytes and helper cells in the immune response
 - l. Discuss the common pathologic conditions in relation to the cardiovascular and lymphatic systems
- F. The nervous system

COURSE OUTLINE

- a. Demonstrate knowledge of structure and function of the human nervous system
 - b. Identify, locate, and describe the components and basic operation of the nervous system
 - c. Compare and contrast the central and peripheral nervous system
 - d. Explain the relationship between the sensory system and the nervous system
 - e. Identify, locate, and describe the internal and external structures of the brain and their corresponding functions
 - f. Explain the motor functions of the brain with related structures
 - g. Compare and contrast the parasympathetic and sympathetic branches of the autonomic system
 - h. Analyze, define, spell, and pronounce words related to clinical procedures associated with the nervous system
 - i. Discuss the common pathologic conditions in relation to the nervous system
- G. The endocrine system
- a. Demonstrate knowledge of the structure and functions of the endocrine system
 - b. Describe the functions of the endocrine glands
 - c. Discuss the purpose and effects of hormones within the body
 - d. Discuss the process of homeostatic control of the hormone levels
 - e. Describe and differentiate between the hormonal, humeral control, and neural control
 - f. Discuss the common pathologic conditions in relation to the endocrine system
- H. Special senses: eyes and ears
- a. Demonstrate the knowledge of the basic structures and functions of the special senses – sight and sound
 - b. Compare and contrast general and special senses
 - c. Identify and describe the internal and external anatomy and functions of the eye
 - d. Identify and describe the internal and external anatomy and functions of the ear
 - e. Discuss the process involved with the senses of taste, touch, and smell
 - f. Compare and contrast the types of pain and the pain response
 - g. Discuss the common pathologic conditions in relation to the special senses

UNIT TWO

VIII. LEGAL, ETHICAL, AND ENVIRONMENTAL PRINCIPLES

- A. Identify individual codes of ethics in various health careers
- B. Identify basic legal and ethical terminology
- C. Identify and understand the Patient's Bill of Rights
- D. Understand corporate citizenship and the importance of building a workplace that protects the health and welfare of the employees, the community, and the environment
- E. Discuss current ethical concerns in the field
- F. Discuss ethical practices including respect for others, malpractice and liability and patient confidentiality (HIPAA)

IX. MEDICAL MATH

- A. Accurately perform basic calculations on whole numbers, decimals, fractions, percentages, and ratios
- B. Demonstrate accuracy when converting between pounds/ kilograms and between feet/ inches
- C. Understand the difference between Fahrenheit and Celsius temperature scales
- D. Use household, metric, and apothecary unit to express measurements such as length, volume, and weight
- E. Accurately compute Body Mass Index (BMI) and calories
- F. Accurately calculate drug dosages including tablets, liquids, and injections
- G. Accurately convert traditional time to military time

X. VITAL SIGNS

- A. Demonstrate the correct procedure for measuring and recording a patient's temperature
- B. Demonstrate the correct procedure for measuring and recording a patient's pulse
- C. Demonstrate the correct procedure for measuring and recording a patient's respiration rate
- D. Demonstrate the correct procedure for measuring and recording a patient's pain level
- E. Discuss the proper procedure for manually and electronically measuring a patient's blood pressure

COURSE OUTLINE

- F. Demonstrate the correct procedure for cleaning, disinfecting, and storing vital sign equipment
- G. Discuss factors that influence the patient's vital signs including the normal and abnormal values of each vital sign

UNIT THREE

XI. PERSONAL WELLNESS AND OCCUPATIONAL SAFETY

- A. Demonstrate proper emergency procedures to be followed in the workplace
- B. Understand that developing goals and attending to personal wellness and growth are instrumental to present and future personal and professional success
- C. Discuss ways to report a safety hazard or injury to a supervisor
- D. Describe three levels of medical asepsis
- E. Recognize the effects of substance abuse in the workplace
- F. Explain the importance of CAL OSHA
- G. Practice preventative mental and physical health measures including diet, nutrition, exercise, risk avoidance (alcohol, drugs, tobacco)
- H. Describe the methods of Universal Precautions/standards that prevent the spread of microorganisms
- I. Demonstrate proper hand washing
- J. Complete course safety requirements/test

XII. DEATH AND DYING

- A. Describe and understand the stages of the grieving process defined by Kubler-Ross
- B. Discuss the rights of the dying patient

COURSE OUTLINE

ESSENTIAL STANDARDS AND KEY ASSIGNMENTS

INDUSTRY SECTOR: Public Services

ESSENTIAL PATHWAY STANDARD – B2.0

Understand the processes by which emergency management organizations and emergency managers exert command and control over an emergency response and recovery operation.

KEY ASSIGNMENT

Design an emergency plan for an earthquake in a major metropolitan area that has shut off access from all directions.

ESSENTIAL PATHWAY STANDARD – B3.0

Demonstrate necessary leadership qualities, team concepts, and personal integrity for emergency response personnel.

KEY ASSIGNMENT

Develop a protocol of appropriate and effective methods of communicating with the public, including techniques such as professional demeanor, active listening, empathy, projecting a confident tone of voice, paraphrasing, and the proper use of nonverbal body language.

ESSENTIAL PATHWAY STANDARD – B6.0

Understand the roles of federal, state, and local agencies in catastrophic event planning, preparation, response, and recovery.

KEY ASSIGNMENT

Analyze the history and outcomes of catastrophic events and the appropriate emergency responses. With two partners, prepare to share what you have learned with the class using multimedia.

ESSENTIAL PATHWAY STANDARD – B9.0

Demonstrate the immediate basic life support and interim medical care for a sick, injured, or compromised person until advanced medical care is provided or transport is initiated.

KEY ASSIGNMENT

Perform technical skill and equipment use required for emergency response occupations—for example, airway, oxygen, and ventilation procedures; suction; bleeding control; shock management; cardiac arrest management; immobilization techniques; traction; splinting; transport; defibrillation; and wound management.

STANDARDS FOR CAREER READY PRACTICE

- 1. Apply appropriate technical skills and academic knowledge.** Career-ready individuals readily access and use the knowledge and skills acquired through experience and education. They make connections between abstract concepts with real-world applications and recognize the value of academic preparation for solving problems, communicating with others, calculating measures, and performing other work-related practices.
- 2. Communicate clearly, effectively, and with reason.** Career-ready individuals communicate thoughts, ideas, and action plans with clarity, using written, verbal, electronic, and/or visual methods. They are skilled at interacting with others: they are active listeners who speak clearly and with purpose, and they are comfortable with terminology that is common to workplace environments. Career-ready individuals consider the audience for their communication and prepare accordingly to ensure the desired outcome.
- 3. Develop an education and career plan aligned with personal goals.** Career-ready individuals take personal ownership of their educational and career goals and manage their individual plan to attain these goals. They recognize the value of each step in the educational and experiential process, and they understand that nearly all career paths require ongoing education and experience to adapt to practices, procedures, and expectations of an ever-changing work environment. They seek counselors, mentors, and other experts to assist in the planning and execution of education and career plans.
- 4. Apply technology to enhance productivity.** Career-ready individuals find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring and using new technology. They understand the inherent risks—personal and organizational—of technology applications, and they take actions to prevent or mitigate these risks.
- 5. Utilize critical thinking to make sense of problems and persevere in solving them.** Career-ready individuals recognize problems in the workplace, understand the nature of the problems, and devise effective plans to solve the problems. They thoughtfully investigate the root cause of a problem prior to introducing solutions. They carefully consider options to solve a problem and, once agreed upon, follow through to ensure the problem is resolved.
- 6. Practice personal health and understand financial literacy.** Career-ready individuals understand the relationship between personal health and workplace performance. They contribute to their personal well-being through a healthy diet, regular exercise, and mental health activities. Career-ready individuals also understand that financial literacy leads to a secure future that enables career success.
- 7. Act as a responsible citizen in the workplace and the community.** Career-ready individuals understand the obligations and responsibilities of being a member of a community and demonstrate this understanding every day through their interactions with others. They are aware of the impacts of their decisions on others and the environment around them, and they think about the short-term and long-term consequences of their actions. They are reliable and consistent in going beyond minimum expectations and in participating in activities that serve the greater good.
- 8. Model integrity, ethical leadership, and effective management.** Career-ready individuals consistently act in ways that align with personal and community-held ideals and principles. They employ ethical behaviors and actions that positively influence others. They have a clear understanding of integrity and act on this understanding in every decision. They use a variety of means to positively impact the direction and actions of a team or organization, and they recognize the short-term and long-term effects that management's actions and attitudes can have on productivity, morale, and organizational culture.
- 9. Work productively in teams while integrating cultural and global competence.** Career-ready individuals contribute positively to every team, as both team leaders and team members. To avoid barriers to productive and positive interaction, they apply an awareness of cultural differences. They interact effectively and sensitively with all members of the team and find ways to increase the engagement and contribution of other members.
- 10. Demonstrate creativity and innovation.** Career-ready individuals recommend ideas that solve problems in new and different ways and contribute to the improvement of the organization. They consider unconventional ideas and suggestions by others as solutions to issues, tasks, or problems. They discern which ideas and suggestions may have the greatest value. They seek new methods, practices, and ideas from a variety of sources and apply those ideas to their own workplace practices.
- 11. Employ valid and reliable research strategies.** Career-ready individuals employ research practices to plan and carry out investigations, create solutions, and keep abreast of the most current findings related to workplace environments and practices. They use a reliable research process to search for new information and confirm the validity of sources when considering the use and adoption of external information or practices.
- 12. Understand the environmental, social, and economic impacts of decisions.** Career-ready individuals understand the interrelated nature of their actions and regularly make decisions that positively impact other people, organizations, the workplace, and the environment. They are aware of and utilize new technologies, understandings, procedures, and materials and adhere to regulations affecting the nature of their work. They are cognizant of impacts on the social condition, environment, workplace, and profitability of the organization.

1: Academics

Analyze and apply appropriate academic standards required for successful industry sector pathway completion leading to postsecondary education and employment. Refer to the industry sector alignment matrix for identification of standards. Note: alignment listed within each sector Anchor Standard

2: Communications Language Standard

Acquire and accurately use general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the (career and college) readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression. LS 9-10, 11-12.6 Anchor Standard

3: Career Planning and Management Speaking and Listening Standard

Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data. SLS 11-12.2 Anchor Standard

4: Technology Writing Standard

Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments and information. WS 11-12.6 Anchor Standard

5: Problem Solving and Critical Thinking Writing Standard

Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem, narrow or broaden the inquiry when appropriate, and synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. WS 11-12.7 Anchor Standard

6: Health and Safety Reading Standards for Science and Technical Subjects

Determine the meaning of symbols, key words, and other domain-specific words and phrases as they are used in a specific scientific or technical context. RSTS 9-10 11-12.4 Anchor Standard

7: Responsibility and Flexibility Speaking and Listening Standard

Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners, building on others' ideas and expressing their own clearly and persuasively. SLS 9-10 11-12.1 Anchor Standard

8: Ethics and Legal Responsibilities Speaking and Listening Standard

Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the work. SLS 11-12.1d Anchor Standard

9: Leadership and Teamwork Speaking and Listening Standard

Work with peers to promote civil, democratic discussions and decision making; set clear goals and deadlines; and establish individual roles as needed. SLS 11-12.1b Anchor Standard

10: Technical Knowledge and Skills Writing Standard

Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information. WS 11-12.6 Anchor Standard

11: Demonstration and Application

Demonstrate and apply the knowledge and skills contained in the industry-sector anchor standards, pathway standards, and performance indicators in classroom, laboratory, and workplace settings, and the career technical student organization.