



Prepares Students for College and Careers

▲ Intro to Medical Careers

COURSE CODES:

▲ ROP 63004 ▲ SWSD 8042 ▲ WUHSD 0000 ▲ ERUSD 0000 ▲ STATE (CALPADS) 7900

Course Leads to: Post-Secondary Education
Industry Sector: Health Science and Medical Technology
Career Pathway: Multiple Pathways **Course Level:** Introductory
Classroom Hours: 180
Work Based Learning: 180 (optional)

Approved Textbook/Curriculum: None.

<p>POST-SECONDARY EDUCATION</p> <p>Articulation with College No Dual Enrollment with College No UC Approved a-g elective credit No</p> <p>POST-SECONDARY MAJORS</p> <p>This course provides information on all career pathways in the Health Science Medical Technology Sector recognized by the State of California.</p>	<p>INDUSTRY CERTIFICATIONS</p> <p>NONE</p> <p>NEXT STEPS</p> <p>ROP Medical Core ROP Foundations in Health Science</p>
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Prerequisites:

None

Course Description:

This course is designed to assist students to explore career options in the health field by building a strong foundation in medical terminology. Other topics include CPR and first aid, anatomy and physiology, and career exploration.

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.

COURSE OUTLINE

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 HEALTHCARE INDUSTRY

- A. Discuss career clusters, ladders, pathways
- B. Thoroughly investigate various occupations within the Health Science and Medical Technologies industry sector
- C. Discuss and research various healthcare occupations, including personal requirements, level of education and licensing requirements needed for employment
- D. Identify professional healthcare organizations
- E. Research salary and current labor market trends in various healthcare careers
- F. Identify essential personal characteristics of the healthcare worker (hair, jewelry, appearance, clothing, uniforms, shoes, nails, makeup)

b

- 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 HEALTH CAREER FIELD

- A. History of health care – milestones and advancements
- B. Discuss important discoveries in healthcare and its impact on societies, cultures, and people
- C. Describe various health care facilities and services
- D. Explain the functions of medical 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 healthcare industries and the importance of cultural sensitivity
- H. Discuss environmentally-sound practices and sustainability within the industry sector

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. Define other selected medical terms and related to color and medical specialties.
- L. Recognize selected abbreviations related to each body system.

VI. ANATOMY AND PHYSIOLOGY

A. The Musculoskeletal System

- a. Demonstrate knowledge of the basic structure and function of the human musculoskeletal system

COURSE OUTLINE

- b. Describe the function of the skeletal system
- 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
- g. Correctly speak, spell, and write medical terms relating to clinical procedures associated with the musculoskeletal system

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. Correctly speak, spell, and write medical terms related to clinical terms associated with the integumentary system
- h. 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. Correctly speak, spell, and write medical terms relating to clinical procedures associated with the respiratory system
- h. Identify common pathologic conditions as they affect the respiratory system

D. The Urinary System

- a. Demonstrate knowledge of the basic structure and function of the human urinary system
- b. Identify and describe the major structures and functions of the urinary system
- c. Identify, locate, and describe the organs of the urinary system and explain their function
- d. Describe the internal and external anatomy and physiology of the kidneys
- e. Discuss the importance of renal blood flow
- f. Describe the process of urine formation
- g. Trace the pathway of reabsorption or secretion of vital substances
- h. Explain the importance of hormones on proper kidney function
- i. Describe the anatomy and physiology of the bladder and urination
- j. Correctly speak, spell, and write medical terms relating to clinical procedures associated with the urinary system
- k. Identify common pathologic conditions as they affect the urinary system

E. 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 of 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
- i. Correctly speak, spell, and write medical terms relating to clinical procedures associated with the reproductive system

COURSE OUTLINE

- j. Discuss the common pathologic conditions in relation to the reproductive system

F. 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
- g. Analyze, define, spell, and pronounce words related to clinical procedures associated with the endocrine system

G. The Skeletal System

- a. Review the anatomy and the physiology of the skeletal system.
- b. Label the parts of the skeletal system.
- c. Identify common disorders of the skeletal system.
- d. Describe a variety of diagnostic procedures of disorders of the skeletal system.
- e. Explain the treatment and management for disorders of the skeletal system.
- f. Explore careers related to the skeletal system.

H. The Circulatory System

- a. Review the anatomy and the physiology of the circulatory system.
- b. Label the parts of the circulatory system.
- c. Identify common disorders of the circulatory system.
- d. Describe a variety of diagnostic procedures of disorders of the circulatory system.
- e. Explain the treatment and management for disorders of the circulatory system.
- f. Explore careers related to the circulatory system.

I. The Gastrointestinal System

- a. Review the anatomy and the physiology of the gastrointestinal system.
- b. Label the parts of the gastrointestinal system.
- c. Identify common disorders of the gastrointestinal system.
- d. Describe a variety of diagnostic procedures of disorders of the gastrointestinal system.
- e. Explain the treatment and management for disorders of the gastrointestinal system.
- f. Explore careers related to the gastrointestinal system.

J. The Neurosensory System

- a. Review the anatomy and the physiology of the neurosensory system.
- b. Label the parts of the neurosensory senses system.
- c. Identify common disorders of the neurosensory system.
- d. Describe a variety of diagnostic procedures of disorders of the neurosensory senses system.
- e. Explain the treatment and management for disorders of the neurosensory senses system.
- f. Explore careers related to the neurosensory system.

COURSE OUTLINE

K. The Immune System

- a. Review the anatomy and the physiology of the immune system.
- b. Label the parts of the immune system.
- c. Identify common disorders of the immune system.
- d. Describe a variety of diagnostic procedures of disorders of the immune system.
- e. Explain the treatment and management for disorders of the immune system.
- f. Explore careers related to the immune system.

VII. CULTURAL DIVERSITY

- A. Describe the stages and characteristics of growth and development.
- B. Identify the developmental characteristics of infancy.
- C. Identify the developmental characteristics of the toddler.
- D. Identify the developmental characteristics of the preschool child.
- E. Identify the developmental characteristics of the school age child.
- F. Identify the developmental characteristics of young adult.
- G. Identify the developmental characteristics of middle age adult.
- H. Identify the developmental characteristics of the older adult.
- I. Define health and wellness.
- J. Define the process of disease.
- K. Discuss proper nutrition, age appropriate diet, and cultural issues related to food.
- L. Identify social and cultural influences on health care.
- M. Explore varying attitudes towards illness and health care.
- N. Discuss the stages of grief and dying and comprehend how they are coping mechanisms.
- O. Discuss the importance of cultural diversity when dealing with patients.

VIII. CARDIOPULMONARY RESUSCITATION (CPR) & FIRST AID

- A. Explain the Emergency Medical Services (EMS) system, including system entry and how entry into the EMS system affects patient outcome.
- B. List risk factors contributing to coronary artery disease, heart attack, or stroke.
- C. List factors that will reduce the chances of having a heart attack.
- D. List the most common signs and symptoms of heart attack.
- E. Recognize the need for CPR.
- F. Explain why denial is common in heart attack victims.
- G. Demonstrate CPR procedures on an infant, child, or adult for the following:
 1. Rescue breathing.
 2. Obstructive airway rescue.
 3. One-man CPR.
- G. List the steps to be taken when performing the Heimlich Maneuver.
- H. Demonstrate first aid procedures for the following:
 1. Shock, wound, burn, poison, and common emergencies.
 2. Demonstrate the proper application of direct pressure to stop bleeding and first aid for fracture.

ESSENTIAL STANDARDS AND KEY ASSIGNMENTS
INDUSTRY SECTOR: Health, Science & Medical Technology

ESSENTIAL PATHWAY STANDARD – A2.0

ESSENTIAL PATHWAY STANDARD – A5.0

ESSENTIAL PATHWAY STANDARD – A6.0

KEY ASSIGNMENT

ESSENTIAL PATHWAY STANDARD – A9.0

KEY ASSIGNMENT

ESSENTIAL PATHWAY STANDARD – A10.0

KEY ASSIGNMENT

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.

CTE ANCHOR STANDARDS—Common Core English Language Arts Alignment

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.