

Course Outline

Health Science and Medical Technology

REVISED: August/2017

Job Title:

Physical Therapist Aide

76-45-55

Career Pathway:

Patient Care

Sports Therapeutics

Industry Sector:

Health Science and Medical Technology

Credits: 15

Hours: 180

O*NET-SOC CODE:

31-2022.00

Course Description:

This competency-based course provides students with hands-on training on the basic duties of a physical therapist, certified athletic trainer, personal trainer, physical therapy aide, fitness instructor, massage therapist, and other fields related to health care. Technical instruction includes an orientation, safety and infection control, communication and interpersonal skills, mathematics proficiency, and employability skills. Emphasis is placed on: ethical and legal issues in sports therapy; observation, reporting, and charting; medical terminology; nutrition and metabolism; first aid and CPR; physical therapy procedures; physical therapy modalities; sports and therapeutic equipment; pharmacology; patient care skills; and clinical protocol. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

CBEDS Title:

Healthcare Occupations

Prerequisites:

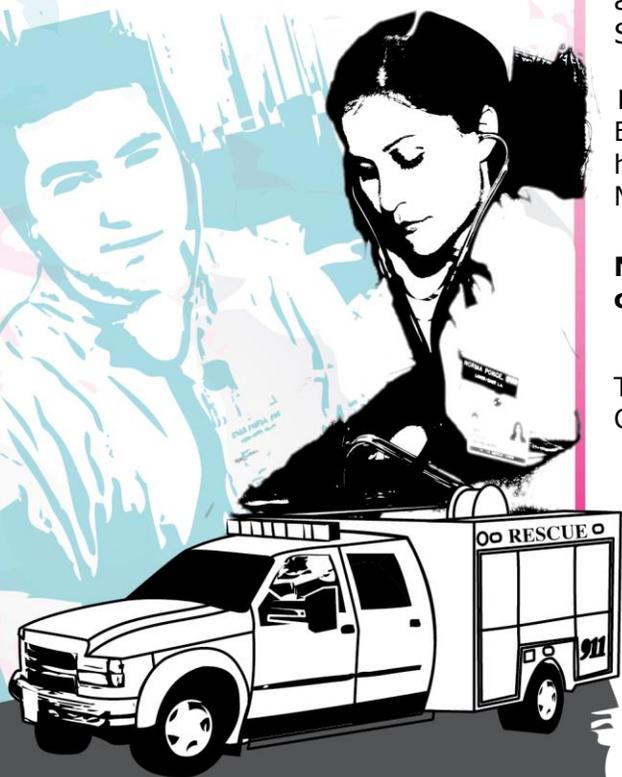
Enrollment requires the minimum age of 16, evidence of optimal health, and tuberculosis screening. Completion of a Biology or Medical Terminology class is highly recommended.

CBEDS No.:

4257

NOTE: For Perkins purposes this course has been designated as a **concentrator/capstone** course.

This course cannot be repeated once a student receives a Certificate of Completion.



COURSE OUTLINE COMPETENCY-BASED COMPONENTS

A course outline reflects the essential intent and content of the course described. Acceptable course outlines have six components. (Education Code Section 52506). Course outlines for all apportionment classes, including those in jails, state hospitals, and convalescent hospitals, contain the six required elements:

(EC 52504; 5CCR 10508 [b]; Adult Education Handbook for California [1977], Section 100)

COURSE OUTLINE COMPONENTS

LOCATION

GOALS AND PURPOSES

Cover

The educational goals or purposes of every course are clearly stated and the class periods are devoted to instruction. The course should be broad enough in scope and should have sufficient educational worth to justify the expenditure of public funds.

The goals and purpose of a course are stated in the COURSE DESCRIPTION. Course descriptions state the major emphasis and content of a course, and are written to be understandable by a prospective student.

PERFORMANCE OBJECTIVES OR COMPETENCIES

pp. 7-17

Objectives should be delineated and described in terms of measurable results for the student and include the possible ways in which the objectives contribute to the student's acquisition of skills and competencies.

Performance Objectives are sequentially listed in the COMPETENCY-BASED COMPONENTS section of the course outline. Competency Areas are units of instruction based on related competencies. Competency Statements are competency area goals that together define the framework and purpose of a course. Competencies fall on a continuum between goals and performance objectives and denote the outcome of instruction.

Competency-based instruction tells a student before instruction what skills or knowledge they will demonstrate after instruction. Competency-based education provides instruction which enables each student to attain individual goals as measured against pre-stated standards.

Competency-based instruction provides immediate and continual repetition and In competency-based education the curriculum, instruction, and assessment share common characteristics based on clearly stated competencies. Curriculum, instruction and assessment in competency-based education are: explicit, known, agreed upon, integrated, performance oriented, and adaptive.

COURSE OUTLINE COMPETENCY-BASED COMPONENTS
(continued)

COURSE OUTLINE COMPONENTS

LOCATION

INSTRUCTIONAL STRATEGIES

p. 19

Instructional techniques or methods could include laboratory techniques, lecture method, small-group discussion, grouping plans, and other strategies used in the classroom.

Instructional strategies for this course are listed in the TEACHING STRATEGIES AND EVALUATION section of the course outline. Instructional strategies and activities for a course should be selected so that the overall teaching approach takes into account the instructional standards of a particular program, i.e., English as a Second Language, Programs for Adults with Disabilities.

UNITS OF STUDY, WITH APPROXIMATE HOURS ALLOTTED FOR EACH UNIT

Cover

The approximate time devoted to each instructional unit within the course, as well as the total hours for the course, is indicated. The time in class is consistent with the needs of the student, and the length of the class should be that it ensures the student will learn at an optimum level.

pp. 7-17

Units of study, with approximate hours allotted for each unit are listed in the COMPETENCY AREA STATEMENT(S) of the course outline. The total hours of the course, including work-based learning hours (community classroom and cooperative vocational education) is listed on the cover of every CBE course outline. Each Competency Area listed within a CBE outline is assigned hours of instruction per unit.

EVALUATION PROCEDURES

pp. 19-20

The evaluation describes measurable evaluation criteria clearly within the reach of the student. The evaluation indicates anticipated improvement in performances as well as anticipated skills and competencies to be achieved.

Evaluation procedures are detailed in the TEACHING STRATEGIES AND EVALUATION section of the course outline. Instructors monitor students' progress on a continuing basis, assessing students on attainment of objectives identified in the course outline through a variety of formal and informal tests (applied performance procedures, observations, and simulations), paper and pencil exams, and standardized tests.

REPETITION POLICY THAT PREVENTS PERPETUATION OF STUDENT ENROLLMENT

Cover

After a student has completed all the objectives of the course, he or she should not be allowed to reenroll in the course. There is, therefore, a need for a statement about the conditions for possible repetition of a course to prevent perpetuation of students in a particular program for an indefinite period of time.

ACKNOWLEDGMENTS

Thanks to AARON SAENZ for developing and editing this curriculum. Acknowledgment is also given to ERICA ROSARIO for designing the original artwork for the course covers.

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CALIFORNIA CAREER TECHNICAL EDUCATION MODEL CURRICULUM STANDARDS
Health Science and Medical Technology Industry Sector
Knowledge and Performance Anchor Standards

1.0 Academics

Analyze and apply appropriate academic standards required for successful industry sector pathway completion leading to postsecondary education and employment. Refer to the Health Science and Medical Technology academic alignment matrix for identification of standards.

2.0 Communications

Acquire and accurately use Health Science and Medical Technology sector terminology and protocols at the career and college readiness level for communicating effectively in oral, written, and multimedia formats.

3.0 Career Planning and Management

Integrate multiple sources of career information from diverse formats to make informed career decisions, solve problems, and manage personal career plans.

4.0 Technology

Use existing and emerging technology to investigate, research, and produce products and services, including new information, as required in the Health Science and Medical Technology sector workplace environment.

5.0 Problem Solving and Critical Thinking

Conduct short, as well as more sustained, research to create alternative solutions to answer a question or solve a problem unique to the Health Science and Medical Technology sector using critical and creative thinking, logical reasoning, analysis, inquiry, and problem-solving techniques.

6.0 Health and Safety

Demonstrate health and safety procedures, regulations, and personal health practices and determine the meaning of symbols, key terms, and domain-specific words and phrases as related to the Health Science and Medical Technology sector workplace environment.

7.0 Responsibility and Flexibility

Initiate, and participate in, a range of collaborations demonstrating behaviors that reflect personal and professional responsibility, flexibility, and respect in the Health Science and Medical Technology sector workplace environment and community settings.

8.0 Ethics and Legal Responsibilities

Practice professional, ethical, and legal behavior, responding thoughtfully to diverse perspectives and resolving contradictions when possible, consistent with applicable laws, regulations, and organizational norms.

9.0 Leadership and Teamwork

Work with peers to promote divergent and creative perspectives, effective leadership, group dynamics, team and individual decision making, benefits of workforce diversity, and conflict resolution as practiced in the Cal-HOSA career technical student organization.

10.0 Technical Knowledge and Skills

Apply essential technical knowledge and skills common to all pathways in the Health Science and Medical Technology sector, following procedures when carrying out experiments or performing technical tasks.

11.0 Demonstration and Application

Demonstrate and apply the knowledge and skills contained in the Health Science and Medical Technology anchor standards, pathway standards, and performance indicators in classroom, laboratory, and workplace settings and through the Cal-HOSA career technical student organization.

Health Science and Medical Technology Pathway Standards

B. Patient Care Pathway

The standards for the Patient Care pathway apply to occupations or functions involved in the prevention, treatment, and management of illness and the preservation of mental and physical well-being through the services offered by the medical and allied health professions. The standards specify the knowledge and skills needed by professional and technical personnel pursuing careers in this pathway.

Sample occupations associated with this pathway:

- ◆ Kinesiotherapist
- ◆ Nurse Anesthetist
- ◆ Respiratory Therapist
- ◆ Radiologic Technician
- ◆ Dental Hygienist

- B1.0 Recognize the integrated systems approach to health care delivery services: prevention, diagnosis, pathology, and treatment
- B2.0 Understand the basic structure and function of the human body and relate normal function to common disorders.
- B3.0 Know how to apply mathematical computations used in health care delivery system.
- B4.0 Recognize and practice components of an intake assessment relevant to patient care.
- B5.0 Know the definition, spelling, pronunciation, and use of appropriate terminology in the health care setting.
- B6.0 Communicate procedures and goals to patients using various communication strategies to respond to questions and concerns.
- B7.0 Apply observation techniques to detect changes in the health status of patients.
- B8.0 Demonstrate the principles of body mechanics as they apply to the positioning, transferring, and transporting of patients.
- B9.0 Implement wellness strategies for the prevention of injury and disease behaviors that prevent injury and illness
- B10.0 Comply with protocols and preventative health practices necessary to maintain a safe
- B11.0 Comply with hazardous waste disposal policies and procedures, including documentation, to ensure that regulated waste is handled, packaged, stored, and disposed of in accordance with federal, state, and local regulations.
- B12.0 Adhere to the roles and responsibilities, within the scope of practice, that contribute to the design and implementation of treatment planning
- B13.0 Research factors that define cultural differences between and among different ethnic, racial, and cultural groups and special populations.

CBE
Competency-Based Education

COMPETENCY-BASED COMPONENTS
for the Sports Therapeutics Course

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
<p>A. ORIENTATION</p> <p>Understand and evaluate the course background and class requirements, procedures, and policies.</p> <p>(2 hours)</p>	<ol style="list-style-type: none"> 1. Describe the scope and purpose of the course. 2. Describe classroom policies and procedures. 3. Define: <ol style="list-style-type: none"> a. physical therapy b. sports therapy 4. List the different occupations in the Health Science and Medical Technology Industry Sector that have an impact on sports therapy aides. 5. Describe the opportunities available for promoting gender equity and the representation of non-traditional populations in sports therapy. 6. Describe and evaluate the impact of Environmental Protection Agency (EPA) legislation on the Health Science and Medical Technology Industry Sector practices. 7. Describe and demonstrate the use of the Material Safety Data Sheet (MSDS) as it applies to sports therapy. 8. Explain the purpose of the California Occupational Safety and Health Administration (Cal/OSHA) and its laws governing sports therapists. 9. Describe the licensing and certification requirements in the employment area. 10. Identify the classroom and training room procedures for fire and earthquake safety. 11. List and describe three basic principles of body mechanics. 12. State the history and evolution of sports medicine and physical therapy. 13. Pass the safety test with 100% accuracy. 	<p>Career Ready Practice: 1, 2, 6, 7, 8, 11, 12</p> <p>CTE Anchor: Academics: 1.0 Communications: 2.3 Career Planning and Management: 3.4, 3.5 Problem Solving and Critical Thinking: 5.6 Health and Safety: 6.1, 6.6, 6.8 Responsibility and Flexibility: 7.2 Ethics and Legal Responsibilities: 8.2</p> <p>CTE Pathway: B9.1, B10.2, B12.1, B12.2</p>
<p>B. ETHICAL AND LEGAL ISSUES IN SPORTS THERAPY</p> <p>Understand and define the ethical and legal issues affecting the sports therapy professional.</p>	<ol style="list-style-type: none"> 1. Define: <ol style="list-style-type: none"> a. legal issues b. medical ethics c. justice d. inter-professional issues e. compliance f. Health Information Portability and Accountability Act of 1996 (HIPAA) g. Patient’s Bill of Rights 	<p>Career Ready Practice: 8</p> <p>CTE Anchor: Ethics and Legal Responsibilities: 8.2, 8.4</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(3 hours)	<ul style="list-style-type: none"> h. medical necessity i. professional confidentiality j. professional liability k. professional negligence/carelessness <ol style="list-style-type: none"> 2. Identify ethical and legal issues. 3. Identify inter-professional and justice issues. 4. Define confidentiality. 5. Describe the following: <ul style="list-style-type: none"> a. Patient's Bill of Rights b. HIPAA confidentiality requirements 	<p>CTE Pathway: B12.2</p>
<p>C. SAFETY AND INFECTION CONTROL</p> <p>Understand, apply, and evaluate safety and infection control measures.</p> <p>(6 hours)</p>	<ol style="list-style-type: none"> 1. Define: <ul style="list-style-type: none"> a. infection b. microorganisms c. standard precautions 2. Identify the criteria and use of standard precautions. 3. Describe how microorganisms affect the body. 4. List the signs and symptoms of infection. 5. Describe how to control the spread of infection. 6. Demonstrate safe and effective methods in moving and lifting clients. 7. Demonstrate safe and effective methods of applying comfort and support devices. 8. Describe the safe and effective use of ambulatory aids and roles of assistants. 	<p>Career Ready Practice: 1, 2, 5, 6, 7</p> <p>CTE Anchor: Health and Safety: 6.2, 6.4, 6.6, 6.8 Technical Knowledge and Skills: 10.1, 10.2 Demonstration and Application: 11.1</p> <p>CTE Pathway: B10.1, B10.2</p>
<p>D. OBSERVATION, REPORTING, AND CHARTING</p> <p>Understand the purpose of a medical record and apply the general guidelines for charting.</p>	<ol style="list-style-type: none"> 1. State the importance of effective reading, writing, and observation skills as required in health care professions. 2. List patient observation techniques. 3. Review the mechanics of grammar in the following areas: <ul style="list-style-type: none"> a. sentence construction b. parts of speech c. subject-verb agreement d. punctuation 4. Identify the components of a Patient Care Report. 5. Report and record patient care. 6. Describe the general guidelines (ABCs) of charting. 7. Demonstrate charting procedures. 8. Demonstrate how to correct charting errors. 	<p>Career Ready Practice: 1, 2, 7, 8, 10</p> <p>CTE Anchor: Academics: 1.0 Communications: 2.4, 2.5 Ethics and Legal Responsibilities: 8.3, 8.7 Technical Knowledge and Skills: 10.1, 10.2, 10.3 Demonstration and Application: 11.1</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(5 hours)		CTE Pathway: B5.2, B7.3, B12.1
<p>E. COMMUNICATION AND INTERPERSONAL SKILLS</p> <p>Understand and apply effective communication skills and professional guidelines.</p>	<ol style="list-style-type: none"> 1. State the importance of effective speaking skills as required in health care profession: 2. Define communication. 3. Describe and demonstrate the following techniques to remove barriers in communication: <ol style="list-style-type: none"> a. using clear verbal and body language to avoid confusion b. being mindful of the demands on other people's time c. conversing and delivering the message to people of different backgrounds and cultures 4. Demonstrate nonverbal communication such as gestures, facial expressions, posture, body language, and touch. 5. Identify the elements of effective leadership. 6. Demonstrate effective leadership skills. 	<p>Career Ready Practice: 2, 8</p> <p>CTE Anchor: Communications: 2.1, 2.2, 2.3, 2.4 Ethics and Legal Responsibilities: 8.3, 8.7 Technical Knowledge and Skills: 10.1, 10.2, 10.3 Demonstration and Application: 11.1</p> <p>CTE Pathway: B5.1, B6.3, B6.4, B6.6</p>
<p>F. MATHEMATICS PROFICIENCY</p> <p>Understand and apply problem solving, critical thinking, and mathematical proficiency skills.</p>	<ol style="list-style-type: none"> 1. State the importance of effective computational skills as required in health care profession. 2. Apply the following math skills to sports therapy problems: <ol style="list-style-type: none"> a. estimation b. measurement c. calculation using the metric system of measurement d. changing standard measures to metric measures e. graph and charts f. multiplication and division g. decimals, percentages, and fractions h. introduction of the 24 – hour clock / military time 	<p>Career Ready Practice: 1, 2, 5, 10</p> <p>CTE Anchor: Academics: 1.0 Problem Solving and Critical Thinking: 5.2, 5.5, 5.6 Technical Knowledge and Skills: 10.1</p> <p>CTE Pathway: B3.1</p>
<p>G. MEDICAL TERMINOLOGY</p> <p>Understand the rules and origin of the medical terms.</p>	<ol style="list-style-type: none"> 1. Define the following: <ol style="list-style-type: none"> a. root words b. prefixes c. suffixes d. abbreviations 2. Describe and demonstrate the correct use of the following: 	<p>Career Ready Practice: 1, 2, 5</p> <p>CTE Anchor:</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(18 hours)	<ul style="list-style-type: none"> a. origin of common medical terms b. forming medical terms c. pronunciation rules for medical terms d. spelling rules for medical terms e. common medical abbreviations and symbols <p>3. Pass an examination on spelling, defining, and analyzing medical terms using roots, prefixes, and suffixes.</p>	<p>Academics: 1.0</p> <p>Communications: 2.7, 2.8</p> <p>CTE Pathway: B5.2, B5.3, B5.4, B5.5, B5.6</p>
<p>H. NUTRITION AND METABOLISM</p> <p>Understand the basics of nutritional deficiencies and ailments, treatment, and weight control.</p>	<ul style="list-style-type: none"> 1. Define the following: <ul style="list-style-type: none"> a. nutrients b. vitamins c. minerals d. food pyramid e. carbohydrates f. fats g. protein h. water i. food labeling j. dietary supplements k. American Dietary Association (ADA) l. metabolism/metabolic 2. Define and describe the functions of the following components of the digestive system: <ul style="list-style-type: none"> a. esophagus b. stomach c. small intestine d. large intestine 3. Describe the relationship between digestion and metabolism. 4. Describe the metabolic role of nutrients, vitamins, and minerals. 5. Identify the presence of the following within levels of the food pyramid as established by the American Dietary Association (ADA): <ul style="list-style-type: none"> a. nutrients b. vitamins c. minerals 6. Describe the nutritional requirements for the athlete in terms of: <ul style="list-style-type: none"> a. carbohydrates b. fats c. protein d. water 7. Define and describe the concept of dietary planning. 8. Describe the use of dietary supplements in a dietary plan. 9. Identify various diets for: 	<p>Career Ready Practice: 1, 2</p> <p>CTE Anchor: Academics: 1.0 Technical Knowledge and Skills: 10.1</p> <p>CTE Pathway: B7.4, B9.2, B12.1</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(12 hours)	<ul style="list-style-type: none"> a. weight loss b. weight gain 	
<p>I. FIRST AID AND CPR</p> <p>Understand and apply first aid and CPR procedures.</p> <p>(10 hours)</p>	<ul style="list-style-type: none"> 1. Describe the purpose of the emergency medical system (EMS). 2. Identify the four key aspects of preparing for an emergency response. 3. Describe and demonstrate first aid and temporary care for the following conditions: <ul style="list-style-type: none"> a. sprains b. strains c. bleeding d. abrasions/lacerations e. fractures f. dislocations 4. Identify the most common/frequent injuries in athletics. 5. Describe the signs and symptoms of shock. 6. State the definition, signs, symptoms, and treatment of the following: <ul style="list-style-type: none"> a. musculoskeletal injuries b. soft tissue injuries c. head injuries d. spine injuries e. chest injuries f. abdominal injuries g. pelvic injuries h. poison emergencies i. heat emergencies j. cold emergencies 7. State the proper use of the Automatic External Defibrillator (AED). 8. Describe the components of a cardiopulmonary resuscitation (CPR) course. 9. Pass a CPR test as offered by a nationally recognized governing body: American Red Cross, American Heart Association (AHA). 	<p>Career Ready Practice: 1, 2, 5, 6, 10, 12</p> <p>CTE Anchor: Health and Safety: 6.2, 6.3, 6.5, 6.6, 6.8 Technical Knowledge and Skills: 10.1, 10.2, 10.5 Demonstration and Application: 11.1</p> <p>CTE Pathway: B8.2, B9.1</p>
<p>J. PHYSICAL THERAPY PROCEDURES</p> <p>Understand the benefits of physical therapy.</p>	<ul style="list-style-type: none"> 1. Define and describe the structure and functions of the following: <ul style="list-style-type: none"> a. bones b. joints c. connective tissue d. muscular tissue e. cartilage f. foot h. ankle i. lower leg j. knee 	<p>Career Ready Practice: 1, 2, 5, 6, 10</p> <p>CTE Anchor: Academics: 1.0 Communications: 2.5</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
	<ul style="list-style-type: none"> k. thigh l. hip m. wrist n. hand o. forearm p. elbow q. upper arm r. shoulder s. head t. neck u. back v. spinal column <ol style="list-style-type: none"> 2. List the types of muscles. 3. Define and demonstrate range of motion. 4. Identify the following physical dysfunctions and disorders of the musculoskeletal system: <ul style="list-style-type: none"> a. joint diseases b. bone diseases c. amputations d. muscle disease e. connective tissue disease f. common injuries g. contractures h. foot drop 5. Describe injury assessment methods. 6. Define: <ul style="list-style-type: none"> a. endurance b. range of motion (ROM) exercises c. anatomical plane d. lower extremities e. upper extremities f. ambulation 7. Perform the following ROM exercises: <ul style="list-style-type: none"> a. anatomical planes of motion b. diagonal patterns of motion c. lower extremities: ROM exercises d. upper extremities: ROM exercises 8. Define the following that assist with ambulation: <ul style="list-style-type: none"> a. assistive device b. crutches c. canes 9. Define: <ul style="list-style-type: none"> a. gait b. gait training c. normal gait d. gait deviations e. coaxial gait f. painful knee gait g. sacroiliac gait h. flexed hip gait 	<p>Problem Solving and Critical Thinking: 5.2, 5.3, 5.4, 5.6</p> <p>Technical Knowledge and Skills: 10.1, 10.2</p> <p>Demonstration and Application: 11.1</p> <p>CTE Pathway: B2.1, B5.1, B6.3, B12.1, B12.3, B13.5</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(45 hours)	<ul style="list-style-type: none"> i. hemiplegic gait j. Parkinsonian gait <p>10. Describe the musculoskeletal areas affected and the associated therapies for:</p> <ul style="list-style-type: none"> a. coaxial gait b. painful knee gait c. sacroiliac gait d. flexed hip gait e. hemiplegic gait f. Parkinsonian gait <p>11. Define the following specialized therapies:</p> <ul style="list-style-type: none"> a. traction b. immobilization by reduction c. application of a cast d. specialized reflex tests <p>12. Analyze various ambulation problems and determine the appropriate assistive device for each.</p> <p>13. Describe types of fractures.</p> <p>14. Describe the areas and injuries that will benefit from the following specialized therapies:</p> <ul style="list-style-type: none"> a. traction b. immobilization by reduction c. application of a cast d. specialized reflex tests <p>15. Define:</p> <ul style="list-style-type: none"> a. nerves b. central nervous system (CNS) c. peripheral nervous system (PNS) <p>16. Describe the effect of musculoskeletal therapy on PNS and CNS.</p> <p>17. Define:</p> <ul style="list-style-type: none"> a. torso b. abdomen c. abdominal quadrants <p>18. Identify and describe the treatment for injuries to the torso.</p> <p>19. Identify and describe the treatment for abdominal injuries.</p> <p>20. Describe prevention strategies for injuries to the torso, abdomen, and extremities.</p> <p>21. State appropriate communication strategies between sports therapy aide and client during physical therapy.</p>	
<p>K. PHYSICAL THERAPY MODALITIES</p> <p>Understand therapeutic exercises, and physical therapy agents and modalities and their effects on body systems.</p>	<p>1. Define the following:</p> <ul style="list-style-type: none"> a. blood vessels b. blood pressure c. heart rate d. pulse 	<p>Career Ready Practice: 1, 2, 5, 7, 9, 10, 12</p> <p>CTE Anchor:</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
	<ol style="list-style-type: none"> 2. Describe the anatomy and functions of the heart and the following as regards to the circulatory system: <ol style="list-style-type: none"> a. blood vessels b. blood pressure c. heart rate 3. Draw a heart, label the main parts of the heart and describe the journey of the blood from and back to the heart. 4. Define the following: <ol style="list-style-type: none"> a. respiratory system b. trachea c. lungs d. bronchi/bronchioles e. respiratory rate 5. Describe the functions of the respiratory system. 6. Define vital signs. 7. Define and demonstrate aerobic exercise. 8. Describe the effect of aerobic exercise on the cardiovascular, respiratory, and nervous systems. 9. Define and demonstrate the following forms of exercise: <ol style="list-style-type: none"> a. strength b. anaerobic c. flexibility d. coordination e. skills 10. State the effects of the following types of exercises on the musculoskeletal and nervous systems: <ol style="list-style-type: none"> a. strength b. anaerobic c. flexibility d. coordination e. skills 11. Describe and demonstrate how to measure muscle strength. 12. Describe the structure and function of structures of the integumentary system: <ol style="list-style-type: none"> a. skin b. hair c. nails d. sweat glands e. sebaceous glands 13. Define and describe the use of superficial and deep heating agents. 14. Describe the change in the following systems caused by the use of superficial and deep heating agents: <ol style="list-style-type: none"> a. cardiovascular b. musculoskeletal c. integumentary d. nervous 15. Define and describe the use of hydrotherapy and cold therapy. 	<p>Academics: 1.0</p> <p>Communications: 2.3, 2.4, 2.5</p> <p>Problem Solving and Critical Thinking: 5.2, 5.3, 5.4, 5.6</p> <p>Health and Safety: 6.4</p> <p>Ethics and Legal Responsibilities: 8.3, 8.7</p> <p>Technical Knowledge and Skills: 10.1, 10.2</p> <p>Demonstration and Application: 11.1</p> <p>CTE Pathway: B2.1, B2.3, B4.4, B4.5, B6.3, B7.4, B8.1, B9.1, B9.3, B12.1, B12.3</p>

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(46 hours)	16. Describe the change in the following systems caused by the use of hydrotherapy and cold therapy: <ol style="list-style-type: none"> cardiovascular musculoskeletal integumentary nervous 17. Recommend treatment modalities based on a range of patient profiles. 18. State appropriate communication strategies between sports therapy aide and client during physical therapy.	
L. SPORTS AND THERAPEUTIC EQUIPMENT Understand and apply the effective use of sports and therapeutic equipment.	<ol style="list-style-type: none"> Identify the different types of sports and therapeutic equipment and the principles behind their use. Describe and demonstrate prevention of injury when utilizing sports and therapeutic equipment. Describe and demonstrate proper use, care, and maintenance of protective pads, knee braces, and ankle braces. Describe and demonstrate the proper use, care, and maintenance of canes and crutches. State appropriate communication strategies between sports therapy aide and client while using sports and therapeutic equipment. 	Career Ready Practice: 1, 2 CTE Anchor: Communications: 2.5 Health and Safety: 6.2, 6.3, 6.4, 6.6 Technical Knowledge and Skills: 10.1, 10.2 Demonstration and Application: 11.1 CTE Pathway: B6.3, B8.4, B8.5, B12.1, B12.3, B12.4
M. PHARMACOLOGY Understand the roles and administration of therapeutic medications.	<ol style="list-style-type: none"> Define the following: <ol style="list-style-type: none"> dispensing routes of drug administration anti-inflammatory and analgesic medications local anesthetic antibiotics natural products Identify proper medication storage. Identify different forms of medications. Describe and demonstrate routes of drug administration. List specific examples of the following medications: <ol style="list-style-type: none"> anti-inflammatory analgesics local anesthetics antibiotics 	Career Ready Practice: 1, 2, 6, 10 CTE Anchor: Academics: 1.0 Problem Solving and Critical Thinking: 5.2, 5.3, 5.4, 5.6 Technical Knowledge and Skills: 10.1, 10.2

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(5 hours)	<ul style="list-style-type: none"> e. natural products 6. Describe the use of the following medications in sports therapy settings: <ul style="list-style-type: none"> a. anti-inflammatory b. analgesics c. local anesthetics d. antibiotics e. natural products 7. Describe the effect of the following medications on the major body systems: <ul style="list-style-type: none"> a. anti-inflammatory b. analgesics c. local anesthetics d. antibiotics e. natural products 	<p>Demonstration and Application: 11.1</p> <p>CTE Pathway: B2.1, B2.3, B12.1, B12.3</p>
<p>N. PATIENT CARE SKILLS</p> <p>Understand and demonstrate the proper patient care skills.</p> <p>(8 hours)</p>	<ul style="list-style-type: none"> 1. Describe and demonstrate preparation for patient care in terms of: <ul style="list-style-type: none"> a. management of the environment b. body mechanics c. verbal commands d. patient preparation e. transporting 2. Describe and demonstrate the following methods in turning and positioning the patient: <ul style="list-style-type: none"> a. turning in the prone and supine position b. turning on the floor mat c. turning from a supine position to a side lying position d. returning from a sitting position to a supine position 3. Describe and demonstrate the following patient transfer skills: <ul style="list-style-type: none"> a. standing transfers b. sitting transfers c. draw sheet transfers d. pneumatic lift transfers e. transfer from floor to wheelchair 4. State appropriate communication strategies between sports therapy aide and client while performing patient care skills. 	<p>Career Ready Practice: 1, 2, 6, 10</p> <p>CTE Anchor: Academics: 1.0 Communications: 2.5 Health and Safety: 6.4, 6.6 Ethics and Legal Responsibilities: 8.7 Technical Knowledge and Skills: 10.2 Demonstration and Application: 11.1</p> <p>CTE Pathway: B6.3, B8.1, B8.3, B8.5, B12.3, B12.4</p>
<p>O. CLINICAL PROTOCOL</p> <p>Understand the clinical protocol in a physical therapy setting.</p>	<ul style="list-style-type: none"> 1. Describe the following activities required in a clinical setting: <ul style="list-style-type: none"> a. grooming requirements b. telephone etiquette c. oral communication skills d. written communications skills 	<p>Career Ready Practice: 2, 3</p>

SUGGESTED INSTRUCTIONAL MATERIALS and OTHER RESOURCES

TEXTBOOKS

Badash, Shirley A. and Doreen S. Chesebro. Health Science Fundamentals. Pearson Education, Inc., 2009.

Clover, Jim C. Sports Medicine Essentials, 2nd Edition. Thomson Delmar Learning, 2007

Seeley, Rod R., Trent D. Stephens, and Philip Tate. Essentials of Anatomy & Physiology, 6th Edition. McGraw-Hill Companies, Inc., 2007.

Starkey, Chad, Johnson, Glen, Athletic Training and Sports Medicine, 4th edition. Jones and Bartlett Publishers, 2006.

Weiss, Roberta C. The Physical Therapy Aide. Delmar Publisher Inc., 1993.

RESOURCES

Employer Advisory Board members

Foundation Standards

<http://www.cde.ca.gov/ci/ct/sf/documents/ctestandards.pdf>

<http://www.cde.ca.gov/be/st/ss/documents/ctestandards.doc>

COMPETENCY CHECKLIST

TEACHING STRATEGIES and EVALUATION

METHODS AND PROCEDURES

- A. Lecture and discussion
- B. Demonstration/participation
- C. Multi-sensory presentation
- D. Individualized instruction
- E. Laboratory practice

EVALUATION

SECTION A – Orientation – Pass the safety test with a score of 100%.

SECTION B – Ethical and Legal Issues in Sports Therapy – Pass all assignments and exams on ethical and legal issues in sports therapy with a minimum score of 80% or higher.

SECTION C – Safety and Infection Control – Pass all assignments and exams on safety and infection control with a minimum score of 80% or higher.

SECTION D – Observation, Reporting, and Charting – Pass all assignments and exams on observation, reporting, and charting with a minimum score of 80% or higher.

SECTION E – Communication and Interpersonal Skills – Pass all assignments and exams on communication and interpersonal skills with a minimum score of 80% or higher.

SECTION F – Mathematics Proficiency – Pass all assignments and exams on mathematics proficiency with a minimum score of 80% or higher.

SECTION G – Medical Terminology – Pass all assignments and exams on medical terminology with a minimum score of 80% or higher.

SECTION H – Nutrition and Metabolism – Pass all assignments and exams on nutrition and metabolism with a minimum score of 80% or higher.

SECTION I – First Aid and CPR – Pass all assignments and exams on first aid and CPR with a minimum score of 80% or higher.

SECTION J – Physical Therapy Procedures – Pass all assignments and exams on physical therapy procedures with a minimum score of 80% or higher.

SECTION K – Physical Therapy Modalities – Pass all assignments and exams on physical therapy modalities with a minimum score of 80% or higher.

SECTION L – Sports and Therapeutic Equipment – Pass all assignments and exams on sports and therapeutic equipment with a minimum score of 80% or higher.

SECTION M – Pharmacology– Pass all assignments and exams on pharmacology with a minimum score of 80% or higher.

SECTION N – Patient Care Skills– Pass all assignments and exams on patient care skills with a minimum score of 80% or higher.

SECTION O – Clinical Protocol– Pass all assignments and exams on clinical protocol with a minimum score of 80% or higher.

SECTION P – Employability Skills– Pass all assignments and exams on employability skills with a minimum score of 80% or higher.

Statement for Civil Rights

All educational and vocational opportunities are offered without regard to race, color, national origin, gender, or physical disability.
