

Perris Union High School District

Course of Study

A. COURSE INFORMATION

Course Title: <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">CTE Sports Medicine & Therapeutic Services Level 1</div> <input type="checkbox"/> New <input checked="" type="checkbox"/> Revised	Subject Area: <input type="checkbox"/> Social Science <input type="checkbox"/> English <input type="checkbox"/> Mathematics <input type="checkbox"/> Laboratory Science <input type="checkbox"/> World Languages <input type="checkbox"/> Visual or Performing Arts <input checked="" type="checkbox"/> College Prep Elective <input type="checkbox"/> Other	Grade Level <input type="checkbox"/> MS <input type="checkbox"/> HS <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input checked="" type="checkbox"/> 9 <input checked="" type="checkbox"/> 10 <input checked="" type="checkbox"/> 11 <input type="checkbox"/> 12
If revised previous course name if changed <div style="border: 1px solid black; padding: 5px; margin-top: 5px;">CTE Sports Therapy</div>	Is this classified as a Career Technical Education course? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Transcript Course Code/Number: <div style="border: 1px solid black; padding: 5px; margin-top: 5px;">608301/2</div> (To be assigned by Educational Services)	Credential Required to teach this course: <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <i>Health Science and Medical Technology Designated Subjects: Career Technical Education</i> <u>To be completed by Human Resources only.</u> </div>	
Required for Graduation: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<div style="border: 1px solid black; padding: 5px; margin-top: 5px; display: flex; justify-content: space-between;"> <div style="flex: 1;"> </div> <div style="flex: 1; text-align: right;"> 4/2/18 Date </div> </div>	
Meets UC/CSU Requirements? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Was this course <u>previously approved by UC</u> for PUHSD? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Will be verified by Ed Services)	Meets "Honors" Requirements? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Meets "AP" Requirements? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Value/Length of Course: <input type="checkbox"/> 0.5 (half year or semester equivalent) <input checked="" type="checkbox"/> 1.0 (one year equivalent) <input type="checkbox"/> 2.0 (two year equivalent) <input type="checkbox"/> Other:	
Submitted by: Dian Martin Site: SSC/Ed Services Date: 3/29/2108		
Approvals	Name/Signature	Date
Director of Curriculum & Instruction		4/09/18
Asst. Superintendent of Educational Services		4/9/18
Governing Board		

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RCOE Sports Medicine & Therapeutic Services, Level 1

Riverside County Office of Ed. ROP

Basic Course Information

CBEDS 4204

Title:	RCOE Sports Medicine & Therapeutic Services, Level 1
Transcript abbreviations:	
Length of course:	Full Year
Subject area:	College-Preparatory Elective ("g") / Laboratory Science – Integrated Science
UC honors designation?	No
Prerequisites:	Anatomy & Physiology (Recommended) Biology (Recommended)
Co-requisites:	None
Integrated (Academics / CTE)?	Yes
Grade levels:	9th, 10th, 11th
Course learning environment:	Classroom Based

Course Description

Course overview:

This course will offer an overview and expand the students knowledge of health careers and establish a foundational platform for careers in physical therapy, exercise science, athletic training, sports medicine, and other careers relating to the medical or paramedical field. The student will explore and examine the introductory components of medical terminology, human anatomy and physiology, emergency medical procedures, soft tissue and bone injuries, sports medicine, physical fitness, and the causes, symptoms, and management of common athletic injuries. The course will provide an environment where students acquire and demonstrate practical, hands-on experience in the prevention, assessment, treatment, taping, wrapping, and rehabilitation of common sports injuries. The student will capture knowledge of the legal and ethical responsibilities relating to sports medicine and athletic training and dialogue issues relating to sport psychology, and performance enhancement philosophies. The curriculum for this course includes high level 21st century skills, such as effective communication, critical thinking, creativity, and collaboration that have been identified as foundational to success in this field.

Course content:

Unit 1: Introduction to Sports Medicine

Through the text and the research of current events, students will explore the field of Sports Medicine, acquire extensive foundational data on the personal attributes of allied health care providers in the field, and basic medical terminology. Students will acquire basic practical skills required for managing the athlete's health, nutrition, and physical performance. Students will comprehend, recognize, and distinguish between the laws and safety practices governing sports medicine from state and federal regulatory agencies, such as the California Occupational Safety and Health Administration (Cal/OSHA) and the Environmental Protection Agency (EPA). Students will discover the role and function of professional organizations, industry associations, and organized labor in a productive society.

□ Unit Assignment(s):

- Students will research and synthesize online sources pertaining to the holistic, healthy benefits of Sports Medicine while simultaneously showcasing their ability to evaluate content validity. Students will then deliver a class presentation on five major health/holistic benefits of Sports Medicine, utilizing oral and listening communication skills and incorporating industry standard language and appropriate use of medical terms.
- Students will research health science based Internet sites to extract pertinent information on the evolution of Sports Medicine. Through the process of summarizing their findings in a 500-word essay in (MLA/APA format) on the historical impact of Sports Medicine, students will facilitate a broader understanding of the vast opportunities and trends encompassing Sports Medicine today. Students will be graded using a formulated rubric.

Unit 2: Ethical and Legal Considerations

Students will analyze and then produce examples of ethical and legal cases and the importance of ethical implications affecting the health care profession with full comprehension of the principles of the National Athletic Trainer's Association Code of Ethics. Students will research and collect information on the importance of compliance with federal laws concerning patient rights and confidentiality through the Patient's Bill of Rights and the Health Information Portability and accountability Act of 1996 (HIPAA).

☐ Unit Assignment(s):

- Students will use internet resources to compare and contrast the cost of liability insurance for primary care practitioners, physical therapist, certified athletic trainer, and strength and conditioning specialist. Students will create a list and compose a 350-word essay in (MLA/APA format) that discerns between what the insurance does and does not cover and the importance of having coverage as a professional working in the health care industry. Students will be graded using a formulated rubric.
- Students will collaborate to research, analyze and interpret a current legal case that involves Health Insurance Portability and Accountability compliance (HIPAA). Students will then put the content knowledge together from their research to summarize and conclude how health care providers can ensure the compliance of confidentiality of medical information.
- Bring in a health care provider currently working in the industry to speak about HIPAA standards and techniques that they use to maintain compliance and allow students the opportunity to analyze and synthesize as a group to ask questions to the presenter.

Unit 3: Communication and Interpersonal Skills

Students will demonstrate understanding and ability to communicate effectively and professionally in all areas of patient care, including strategies and skills for removing ethnic and cultural barriers. Students will learn to assess diverse audiences and deliver their message using verbal and nonverbal skills and enhance the patient experience of care while being sensitive and mindful to cultural differences in communicating.

☐ Unit Assignment(s):

- Students will use the definition and analysis of strong communication to compose a 500-word essay (MLA/APA format) showing a dialog between a /clinician trainer and a client by using effective verbal and nonverbal communication. Students will be graded using a formulated rubric.
- Students will list and describe the elements of effective leadership and create a chart by comparing and contrasting leadership skills and follower skills. Students will present their research findings to the class. Students will be graded using a formulated rubric.

Unit 4: Academic Proficiency (Writing, Speaking, Mathematics, and Medical Terminology)

Students will analyze and apply problem-solving, critical thinking, and academic proficiency skills required in a medical forum. Students will identify the origins and taxonomy of relevant medical terminology as it is related to the medical field. Students will demonstrate the importance of effective reading, writing, speaking, and computational skills in the health care profession. Students will accumulate a robust vocabulary of medical terminology. Students will apply mathematical formulas to sports medicine problems and subsequently propose and test hypotheses based on their work which would include computations of proper patient treatment settings and treatment times with industry specific equipment. Students will apply appropriate interviewing techniques that demonstrate knowledge of the subject or organization.

☐ Unit Assignment(s):

- Students will compose a mock-report describing a client's medical complaints, initially writing the sentences with the use of common words. The student will then convert the information into an accurate medical report using proper medical terminology and medical abbreviations.
- Students will deduce information from a medication for pain and acquire dosage in metric and imperial units. The students will create a mathematical problem that includes conversion to the metric system and illustrate how they developed their answer.
- Students will compose a 500-word essay (MLA/APA format) describing a recent event in which the student or someone else did not use good listening skills. The student will evaluate the situation and explain what could have been done differently to illustrate good listening skills and highlight the necessary skills in being a good listener. Students will be graded using a formulated rubric.
- Students will explore and evaluate a claim from a fitness magazine or Internet article. The student will test the validity of the claim by researching facts and fallacies of the claim. The student will compile and analyze all of his/her experiment results and share with classroom peers.

Unit 5: Medical Conditions

Students will identify, comprehend, and analyze various genetic and non-genetic medical conditions most commonly affecting athletes in sports medicine, such as diabetes mellitus, hypoglycemia and insulin shock, asthma, seizure disorders (epilepsy), appendicitis, genetic heart conditions, and common bacterial and viral infections. Students will argue the importance of evaluation and standard protocols for medical conditions in Sports Medicine.

☐ Unit Assignment(s):

- Students will develop and demonstrate standard patient assessment, treatment, and management plan for athletes with diabetes. Students will compose a 500-word essay (MLA/APA format) that analyzes and articulates the effect of inadequate insulin therapy has on ventilation and why the ventilation is beneficial to the patient. Students will be graded using a formulated rubric.
- Students will work in small groups to research/develop and demonstrate a standard patient assessment, treatment, and management plan for an athlete with an specific assigned medical

condition given by the instructor. Students will then compose a medical document describing the assessment and management plan to be placed in the patient's chart. Groups will create a PowerPoint of the formulated information that will be presented to the class. In doing so, students have the opportunity to teach and learn how to manage all of the common disorders and ailments mentioned within this unit.

Lab:

Students will perform a patient assessment on a simulated patient with a heart condition. Students will compose a medical document utilizing HOPS (History, Observation, Palpation and Stress test) methods and create a formulated management plan.

Students will illustrate the proper administration of nitroglycerine. Students will be graded using a skills testing rubric.

Unit 6: Emergency Preparedness and Assessment

An emergency is defined as an unforeseen combination of circumstances and the resulting state that calls for immediate action. The student must immediately assess the injured patient and systematically prioritize next steps in dealing with the emergency and the appropriate emergency care. In this unit, students will identify and summarize the nature of the interdependency of health care professionals within a given health care delivery system and the interconnected components of an EAP (Emergency Action Plan). Students will become proficient in assessing an injured athlete using proper emergency procedures and applying appropriate documentation for a emergency procedure and event.

☐ Unit Assignment(s):

- Students will identify and label the body planes on a human body diagram and illustrate an example by describing a sports injury deduced from the secondary survey. Students will compose a 250-word (MLA/APA format) essay articulating the details of the injury. Students will be graded using a formulated rubric scale.
- Students will demonstrate comprehension of life-saving and emergency preparedness by creating an Emergency Action Plan (EAP) of their own from each location at their school site. Students will compose a report articulating the exact steps of the EAP of a real-life incident. Students will be graded using a formulated rubric scale.
- Students will compose a 350-word reflection (MLA/APA format) essay on the Emergency Action Plan (EAP) and compose outcomes of the event. Students will be graded using a formulated rubric.

Lab:

Students will conduct an Emergency Action Plan (EAP) and complete a primary and secondary survey for a predetermined scenario through original analysis, evaluation, and elaboration. Students will be graded using a skills testing rubric.

Unit 7: Infection Control and Bloodborne Pathogens

Students will identify and comprehend the importance and use of Standard Precautions and Infection Control, as well as the rules and regulations of the Occupational Safety and Health Administration (OSHA) and the Centers for Disease Control (CDC) and prevention. Students will demonstrate how to evaluate potential causes and methods of transmitting infections and how to apply standard precautionary guidelines. Students will analyze the components of a comprehensive training program for health care, including safety, infection control, handling hazardous materials, and use of equipment. Students will apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks pertaining to infection control and bloodborne pathogens.

☐ Unit Assignment(s):

- Students will research, analyze and determine the risk of viral infections by composing a 500-word (MLA/APA format) essay articulating the risk of infections and comparing/contrasting the signs and symptoms of Hepatitis B and HIV. Students will demonstrate the evaluation of potential causes and methods of transmitting the infection and how to apply standard precautionary guidelines. Students will be graded using a formulated rubric scale.

Lab:

Students will recall and demonstrate infection control procedures by practicing the removal of blood-stained gloves and clothing. Students will be graded using a formulated skills rubric.

Students will compose a 150-word (MLA/APA format) justification concerning the proper removal of contaminated items and how to properly dispose of them. Students will be graded using a formulated rubric scale.

Unit 8: Vital Signs Assessment

Students will list and demonstrate the clinical protocol in assessing vital signs. Students will identify and analyze the role of human vital signs and apply mathematical skills to common sports medicine complications. Students will formulate all components of human physiology and biology and their functions in sports medicine, including the cardiovascular system and respiratory system.

☐ Unit Assignment(s):

- Students will research and identify the importance of vital signs to medical conditions and athletic injuries. Students will demonstrate standard skills to perform vital signs (Blood Pressure, Temperature,

Pulse, and Breathing) in the clinic and in emergency situations. Students will be graded using a skills rubric.

Lab:

Students will demonstrate effective procedures to obtain and compute vital signs from measuring body temperature, blood pressure, pulse rate, and respiratory rate on fellow peers. Students will compose a 250-word essay (MLA/APA format) on how exercise impacts blood pressure and pulse rate. Students will be graded using a formulated rubric scale.

Students will develop a hypothesis on how exercise affects a patient's vital signs. Students will then obtain and measure vital sign data from three classmates both before and after exercise. Students will graph and compare/contrast the results for each classmate with the medically accepted normal levels. Students will compose a note for each classmate's patient chart on the results of their measurement findings. Students will be graded using a formulated rubric scale.

Unit 9: Basic Life Support for Healthcare Providers

Students will use their extensive knowledge base in human anatomy and physiology to comprehend and apply life-saving first aid and Cardiopulmonary Resuscitation (CPR) procedures. Students will explore the ethical and legal considerations for rendering life-saving aid. Students will become proficient in assessing and administering the use of CPR and in operating an Automated External Defibrillator (AED) utilizing standard guidelines by the American Red Cross (ARC) and American Heart Association (AHA).

Unit Assignment(s):

- Students will identify and label each component of the circulatory pathway for the cardiac and pulmonary system.
- Students will compose a 500-word (MLA/APA format) essay describing the chain of survival and the importance of performing Cardiopulmonary Resuscitation (CPR) and operating an Automated External Defibrillator (AED) when needed during an emergency situation both on and off the field of competition. Students will be graded using a formulated rubric scale.

Lab:

Students will demonstrate CPR and AED skills on the manikin to simulate real-life emergencies. Students will successfully demonstrate strict protocol as they demonstrate CPR and AED skills on an adult, child, and infant manikins. Students will be graded using a formulated skills rubric.

Students will demonstrate comprehension of the obstructed airway maneuver by demonstrating the skills necessary to help a choking victim. Students will compose a 150-word reflection essay on the procedures and outcomes. Students will be graded using a formulated skills rubric.

Students will use the Internet to research local CPR classes. Students will design a poster illustrating the importance of CPR and include sign-up information for three locations they obtained during their Internet research.

Unit 10: Environmental Conditions

Students will identify, analyze, and determine how extreme environmental conditions can affect athletes in the sports medicine profession. Students will apply anatomy and physiology knowledge to predict health effects of the human body under various degrees of environmental stressors such as cold and heat. Students will analyze homeostasis under different environmental conditions, and infer the physical and cognitive affects these conditions could have on the human body. Students will use critical thinking skills to make informed decisions and solve problems.

Unit Assignment(s):

- Students will apply standard patient assessment, treatment, and management plan for athletes with sunburn. Students will compose a medical document describing the assessment and management plan to be placed in the patient's chart. Students will be graded using a formulated skills rubric.
- Students will relate standard patient assessment, treatment, and management plan for athletes with frostbite. Students will compose a medical document describing the assessment and management plan to be placed in the patient's chart. Students will be graded using a formulated skills rubric.

Lab:

Students will perform an assessment and create a treatment plan for athletes with heat related emergencies. Students will compose a medical document describing the assessment and treatment plan to be placed in the patient's chart. Students will be graded using a formulated skills rubric.

Students will perform a patient assessment on a simulated patient with a heat related emergency. Students will compose a medical document utilizing the HOPS (History, Observation, Palpation, Stress Test) methods and create a management plan. Students will prioritize the proper administration of ice during stages of heat related emergencies. Students will compose a 350-word (MLA/APA format) reflection essay on the Emergency Action Plan (EAP) and outcomes of the lab exercise. Students will be graded using a formulated rubric.

Students will calculate the carbohydrate concentration, sodium, and potassium of various drinks to evaluate for proper hydration resulting in peak performance. Students will graph their results and present their findings in small groups.

Unit 11: Injuries to Tissues

Students will research, analyze, and explain the injury cycle including hemorrhage, inflammation, atrophy, and pain. Students will categorize the different types of tissue injuries, the cardinal signs of inflammation and the stages of healing. Students will identify the basic structures and functions of cells and how this knowledge is used in biotechnology. Students will apply medical terminology appropriate to diagnostic services to interpret, transcribe, and communicate information and observations. Students will demonstrate standard evaluation to assess athletes and patients. Students will analyze and predict potential injuries related to cell structures, integumentary, lymphatic, skeletal, and the muscular systems as a result from non-traumatic and traumatic athletic occurrences.

☐ Unit Assignment(s):

- Using in-depth knowledge of the muscular system, students will articulate and demonstrate muscle tests for the extremities. Students will compose a 450-word (MLA/APA format) essay to describe the actin and myosin relationship during a muscular contraction. Students will be graded using a formulated skills rubric.
- Using in-depth understanding of the integumentary system, students will compose a 150-word (MLA/APA format) essay describing Vitamin D production and its role in the body. Students will be graded using a formulated skills rubric.

Lab:

Students will analyze a patient with a sprain and utilize the five steps of PRICE (Protect, Rest, Ice, Compress, and Elevate) to effectively stabilize the patient. Students will be graded using a skills rubric.

Students will choose a sports-related injury and describe how the PRICE procedure will be applied to their patient. Students will use the medical data and their analysis to design and create a handout for the client explaining the benefits of the student's proposed treatment. Students will be graded using a skills rubric.

Students will demonstrate medical procedures used to control bleeding on a simulated athlete and explain the importance of dressings and bandages in Sports Medicine. Students will articulate their understanding of tissue-related injuries by composing a 450-word (MLA/APA Format) essay on the effect of hyperglycemia and diabetes mellitus on wound healing. Students will be graded using a formulated rubric.

Using in-depth understanding of the skeletal system, students will conduct two lab experiments by describing and demonstrating splinting and range of motion (ROM). Students will be graded using a skills rubric.

Unit 12: Taping, Wrapping and Bracing

Students will identify and demonstrate the importance of taping, wrapping and bracing to prevent and/or treat sport-related injuries and how it affects the biopsychosocial model. Students will analyze the anatomy and principles of body mechanics to determine mechanism of injury and effective taping, wrapping and bracing techniques. Students will analyze proper body mechanics, ergonomics, safety equipment, and

techniques to prevent personal injury while providing care. Students will use critical thinking skills to make informed decisions and solve problems regarding preventative wrap and taping techniques to address the needs of the patient.

☐ Unit Assignment(s):

- Students will compose a 350-word (MLA/APA format) essay on the advantages/disadvantages when comparing prophylactic to kinesio-taping techniques. Students will create a poster identifying, analyzing and connecting the different athletic scenarios of where and when tape is commonly used. Students will be graded using a skills rubric.

Lab:

Students will evaluate simulated injured athletes and demonstrate proper prophylactic taping techniques for upper and lower extremity joints or muscle. Students will be graded using a skills rubric.

Students will compose a 150-word (MLA/APA format) reflection essay on the procedures performed and outcomes achieved. Students will be graded using a formulated rubric.

Students will evaluate simulated injured athletes and demonstrate kinesiology taping techniques for upper and lower extremity joints or muscle. Students will compose a 150-word (MLA/APA format) reflection essay on the procedures performed and outcomes achieved. Students will be graded using a skills rubric.

Students will research and formulate data regarding the different types of preventative wrap and taping supplies. Students will design and create a chart of these supplies and the budgetary needs to adequately stock for a full sports team. Students will be graded using a skills rubric.

Unit 13: Nutrition and Weight Management

Students will identify the essentials of good nutrition, nutritional deficiencies and ailments, hormones, and weight control. Students will argue the impact of nutrition on the body and mind and debate various nutritional strategies for increasing and enhancing performance and managing body weight. Students will express their understanding of human physiology and biology in sports medicine by integrating the components and functions of the digestive, endocrine, and reproductive systems.

☐ Unit Assignment(s):

- Students will use the United States Department of Agriculture (USDA) website to compare their diet to a personalized plan based on age, gender, weight, and physical exercise. Students will compose a 250-word (MLA/APA format) essay on the necessary components for proper nutrition and analyze the

outcomes of proper and poor nutrition on overall health and wellness. Students will be graded using a formulated rubric.

- Students will use evidence-based research and compose a 450-word (MLA/APA format) essay describing the major functions of insulin and glycogen during exercise and rest. Students will be graded using a formulated rubric.
- Students will identify and label the organs involved in the digestion process on a manikin. Students will next create a visual diagram depicting the functions of the digestive system: enzyme, source, and function.
- Students will create a chart showing the functions of the endocrine system with an emphasis of water balance.
- Students will research on the Internet and compose a 250-word (MLA/APA format) essay explaining the impact of exercise on the production of estrogen and testosterone on the human body. Students will then create a graph illustrating the hormonal peaks during rest and exercise.

Lab:

Students will conduct a two-part experiment. Students will measure the amount of calories they consume in one day and predict their weekly intake. Students will then document and measure their food consumption for a week and calculate the total amount of calories consumed. The students will design and compose a chart based on their calculations. Students will use the chart to compare and contrast the estimated calories from the first part of the experiment to the actual calculated calories from the second part of the experiment. Students will be graded using a formulated rubric.

Unit 14: Physical Fitness Assessment

Students will describe, analyze, and evaluate the importance of general physical fitness. Students will exponentially expand their knowledge of human anatomy and physiology by identifying, explaining, and evaluating the aspects and functions of the cardiovascular, respiratory, skeletal, and muscular systems. Students will identify the key components and elements in evaluating and performing a fitness examination on an athlete and incorporate the assessment into an overall understanding of the level of fitness and performance capacity.

☐ Unit Assignment(s):

- Students will draw a heart, identify and label the main parts of the heart, and describe the pathway of the blood away from and back to the heart.
- Students will design and illustrate a diagram of the circulatory system and present it to the class.
- Students will draw the lungs, label the main parts of the lungs, and describe the journey of deoxygenated blood to and from the lungs in an oxygenated form. Students will create a diagram of the circulatory system and present it to the class.
- Students will compose a 250-word (MLA/APA format) essay describing the actin, myosin, and adenosine triphosphate (ATP) relationship during muscular contraction. Students will be graded using a formulated rubric.

- Students will compose a self-reflecting 500-word (MLA/APA format) essay on the evaluation of their current health habits both good and bad. Students will then conclude how they will prioritize to improve on their bad habits. Students will list the steps they will take to accomplish their health goals. Students will be graded using a formulated rubric.
- Students will compose a 150-word (MLA/APA format) essay on how abnormal diaphragmatic breathing patterns affect posture. Students will compare and contrast good and poor posture related to athletic performance. Students will be graded using a formulated rubric.
- Students will research the athletics department at their school and list the types of physical assessments required for completion prior to participation. Students will compare and contrast California Interscholastic Federation (CIF) and L.A. City Section rules and regulations.
- Students will fill out a Pre-Participation Evaluation (PPE).

Lab:

Students will conduct an experiment using original data they collect. Students will gather data on their pulse rates before and after exercising. Using this data, students will analyze the data and compare/contrast the results. Students will further demonstrate their comprehension of the material by composing a 450-word (MLA/APA format) essay describing heart rate, differentiating between all the information that can be gleaned from monitoring a pulse and describe the changes in the heart rate caused by exercising. Students will be graded using a formulated rubric.

Students will use EKG (Electrocardiography-recording of the hearts electrical activity) strips to analyze and discuss normal and abnormal heart rhythms. Students will identify and differentiate between each EKG strip. Students will compose a 150-word (MLA/APA format) reflection essay on the procedures and outcomes. Students will be graded using a formulated rubric.

Students will collect real data by taking their pulse before and after exercising. Students will analyze this data and compose a 150-word (MLA/APA format) reflection essay on the procedures and outcomes. Students will be graded using a formulated rubric.

Students will collect original data by conducting a test of cardiovascular endurance on a classmate. Students will analyze and present their findings in a 350-word (MLA/APA format) report. Students will be graded using a formulated rubric.

Students will collect real data by taking respiratory rate before and after exercising. Students will analyze this data and compose a 150-word report on their findings.

Students will conduct an extensive experiment and demonstrate tests for muscular endurance. Students will design and create a Physical Assessment chart that includes muscular endurance, flexibility, cardiovascular endurance, and body composition. Students will collect data from classmates by having them complete the Physical Assessment Chart for four weeks. Students will compile all the data they collect and compose an evaluation report on the results of their findings. Students will be graded using a formulated rubric.

Students will research the Internet for the correct calculation of BMI (body mass index) and body fat percentage to calculate their personal BMI and body fat percentage. Students will use this data to compose a

150-word (MLA/APA format) summary comparing and contrasting their personal results and medically acceptable normal values. Students will be graded using a formulated rubric.

Unit 15: Strength and Conditioning

Students will add to their knowledge of human anatomy and physiology by identifying and distinguishing between functions of the skeletal, cardiovascular, and muscular systems. Students will analyze the functions of these systems as they pertain to the strengthening and conditioning of the human body by illustrating how the physiological components affect the human body and athletic performance. Students will then be able to formulate how exercise and sport specific demands affect the athlete in various ways.

Unit Assignment(s):

- Students will compare and contrast the differences between a personal fitness trainer and strength and conditioning specialist through conducting research on the Internet.
- Students will create a chart and illustrate the functions of the muscular system and how it pertains directly to the athlete.
- Students will assess and comprehend the health advantages and disadvantages utilizing free-weights and stationary machines for resistance training.
- Students will identify the current trends in strength and conditioning and physical fitness training. Students will compose a 150-word (MLA/APA format) essay and explain which trend they would be an ideal fit for and why. Students will be graded using a formulated rubric.
- Students will compose a 250-word (MLA/APA format) essay to explain the importance to evaluate their client's physical and medical history before beginning the strength and conditioning or physical fitness program. Students will be graded using a formulated rubric.

Lab:

Students will explain the importance of cardiovascular and muscular endurance by demonstrating a variety of exercises to their peers. Students will compose a 250-word (MLA/APA format) essay illustrating how cardiovascular and muscular endurance exercise affects the mitochondria in a cell. Students will be graded using a formulated rubric.

Students will explain the importance of flexibility in the muscular system by demonstrating flexibility exercises to peers. Students will compose a 250-word (MLA/APA format) essay illustrating how flexibility exercises can be incorporated into a strength and conditioning program. Students will be graded using a formulated rubric.

Students will explain the importance of resistance training exercises on the muscular and skeletal systems by demonstrating exercises to peers. Students will compose a 250-word (MLA/APA format) essay describing how resistance training can prevent and/or delay Osteoporosis in the geriatric population. Students will be graded using a formulated rubric.

Unit 16: Employability Skills and Personal Development

Students will research the careers in rehabilitative health care beginning with a look at the specific careers, their educational requirements, their potential earnings, and their role in Sports Medicine. Students will identify, analyze, and evaluate the employability skills required as a primary sports medicine physician, chiropractor, physical therapist, athletic trainer, personal fitness trainer, strength and conditioning specialist, and nutritionist. Students will learn how to create professional resumes and profiles, improve professional networking, enhance interviewing and meeting conduct skills, and learn marketing strategies on social media.

Unit Assignment(s):

- Students will conduct interviews with three adults employed in the sports medicine field. Students will compare and contrast the data they receive and assess how it applies to a career in sports medicine. Students will design and create a presentation board to illustrate the data and information they collected. Students will be graded using a formulated rubric.
- Students will conduct an Internet research and calculate the full value of two different jobs by analyzing the salary, health insurance, paid vacation time, retirement benefits, and life insurance. Students will compile this data and create a multimedia presentation of the data formulated showing their analytical findings and evaluating the best job for them and why. Students will be graded using a formulated rubric.

Lab:

Students will conduct a video-recorded mock interview to practice their skills and receive feedback from peers. Students will be evaluated on communication skills, body language, attire, professionalism, and knowledge in sports medicine related areas. Students will be graded using a formulated rubric.

Course Materials

Textbooks

Title	Author	Publisher	Edition	Website	Primary
Principles of Athletic Training: A competency-based approach	William E. Prentice	McGraw-Hill	15th Edition/2013	www.mhhe.com	Yes

Sports Medicine Essentials. Core Concepts in Athletic Training & Fitness Instruction	Jim Clover	Cengage Learning	3rd Edition/2016	www.cengage.com	No
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Manuals

Title	Author	Publisher	Edition	Website	Read in entirety
Basic Life Support Provider Manuel	American Heart Association	Channing L. Bete Co INC	1st Edition/2016	www.cpr.heart.org	Yes