MISSION VALLEY REGIONAL OCCUPATION PROGRAM

Sports Therapy 1 Course Outline

1. Course Title: Sports Therapy 1

2. CTE Career Sector and Pathway:

Health Science and Medical Technology; Patient Care (pathway 198)

3. CALPADS Number: 7922

4. Job Titles:

	NHCSS Clusters	O*NET Codes
Entry-level		
Massage Therapist		31-9011.00
Masseur/Masseuse	334.374-010	
Physical Therapist Aide	355.354-010	31-2022.00
Recreation Aide	195.367-030	
Chiropractic Assistant	079.364-010	
Orthopedic Assistant	078.664-010	
Technical-level		
Occupational Therapist Assistant	076.364-010	31-2011.00
Physical Therapist Assistant	076.224-010	31-2021.00
Recreational Therapist	076.124-014	29-1125.00
Fitness Trainer and Aerobic Instructor		39-9031.00
Sports Instructor	153.227-018	
Professional-level		
Certified Athletic Trainer (ATC)	153.224-010	29-9091.00
Physical Therapist	076.121-014	29-1123.00
Chiropractor	079.101-010	29-1011.00
Surgeon	070.101-094	29-1067.00
Occupational Therapist	076.121-010	

5. Course Length:

This is a year-long course which meets 2 hours each day with ten credits possible each semester.

6. Course Description:

Sports/Physical Therapy teaches human anatomy and physiology within the context of sport. Students learn how the many systems of the body interact with one another and adapt to the demands placed on the body by sport. Students will participate in multiple laboratory activities in class. In addition, students will spend time outside the classroom learning the prevention, recognition, evaluation and treatment of athletic injuries. After initial classroom instruction in the two-hour program, students are placed in local clinics or other Athletic Training facilities for Community Classroom training. Integrated throughout the course are career preparation standards, which include workplace basic skills and behaviors, career technical skills, and job employment skills.

Date of Revision: August 3, 2023 Approved by Advisory:

7. Hours:

Students enrolled in this two-hour course receive approximately 240 hours of class instruction and 120 hours of work-based learning at community classroom sites, which allows for 360 hours of training.

8. Prerequisites:

Second Semester Community Classroom (Internship) requirements: Students must successfully complete the first semester class work at 84% or better, maintain acceptable attendance and have teacher recommendation. Students may be required to provide immunization records, proof of a negative TB test, and Covid Vaccinations. Students will also be responsible for their own transportation to and from their internship sites.

9. Articulation:

This course is articulated with Chabot College. Students who earn a B or better in both semesters of the Sports Therapy 1 course and complete the Chabot College application process will be eligible for 3.0 college credits for KINE 2: Introduction to Athletic Training.

10. Academic Credit: 20 units of High School credit

11. UC/CSU A-G Eligibility:

This course meets the UC/CSU A-G "g" requirement.

12. Instructional Materials

Textbook: Diversified Health Occupations, 9th Edition, Louise Simmers, 2022

Course Outline:

Upon successful completion of this course, students will be able to demonstrate the following skills necessary for entry-level employment.

Unit	Content Area Skills	Hours
Integrated Throughout the course	**Workplace Basic Skills & Behaviors** (Necessary skills for any occupation – MVROP SLO #1) Learner Outcomes: A. Apply skills learned in class. B. Analyze information and make decisions. C. Communicate verbally and in writing. D. Work independently and as a team member in a diverse workplace. E. Work reliably, responsibly, and ethically. a. Identify types of harassment and complaints b. Describe laws related to harassment c. Understand and apply the **HIPAA** act (*certification*)	Integrated Throughout the course

Integrated throughout the course	**Career Technical Skills** Learner Outcomes (Occupational competencies – MVROP SLO #2) A. Use appropriate technology. B. Understand and practice occupational safety standards. a. Use correct body mechanics while performing procedures in the laboratory or clinical area. b. Observe all safety standards established by the Occupational Safety and Health Administration (OSHA), especially the Occupational Exposure to Hazardous Chemicals Standards & the **Blood borne Pathogen Standard** *(certification)*. c. Observe all regulations for patient safety while performing procedures in any area. d. List the main classes of fire extinguishers e. Locate and describe the operation of the nearest fire alarm f. Describe the evacuation plan according to school policy	Integrated throughout the course
Final Unit or any best fit within the course ***MANDATORY FOR ALL ROP COURSES***	**Job Employment Skills** (Occupational competencies – MVROP SLO # 3) Learner Outcomes: A. Develop a plan to achieve career goals. ***a. Create a Career Portfolio*** i. Cover letter ii. Application iii. Resume iv. Thank you letter	16
	Sports Therapy 1-Content Area Skills	
Unit	**Content Area Skills**	**Hours**
1	**Introduction to Sports Medicine** Learner Outcomes: A. History of sports medicine B. Disciplines involved in sports medicine C. Legal and ethical issues including HIPAA educational requirements, and employment opportunities.	?
2	**Emergency Procedures** Learner Outcomes: A. American Heart Association 1st CPR a. LAB: CPR Certification B. Blood borne pathogens a. HIV/AIDS	?

	b. Hepatitis c. Universal Precautions i. LAB: universal precautions C. Evaluation procedures a. HOPS b. SOAP notes D. Discussion and demonstration of use of spine board and c-collar	
3	**<u>The Human Body</u>** Learner Outcomes: A. Anatomical terms including planes, directional terms and cavities a. LAB: Basic Terms B. Body organization and systems C. Homeostasis and vital signs a. How body maintains homeostasis in heat, cold and altitude i. Injuries due to cold stress, heat stress and attitude ii. LAB: Assessing Vital Signs (temperature, pulse, blood pressure and respiration)	?
4	**<u>Cell Structure and Function</u>** Learner Outcomes: A. Definition of a cell. B. Anatomy of a typical cell a. Structure and function of organelles b. LAB: Cells and their functions	
5	**<u>Tissues</u>** Learner Outcomes: A. Function, characteristics and morphology of a. Epithelial tissue b. Connective tissue c. Muscular tissue d. Nervous tissue e. LAB: Tissue Identification B. Tissue response to injury a. Response to trauma b. The injury cycle c. Healing and regeneration d. Effects of modalities on the injury cycle e. Pharmacology as it relates to the injury cycle	

6	**<u>Integumentary System</u>** Learner Outcomes: A. Anatomy of the integumentary system. B. Functions of the integumentary system C. Disorders of the integumentary system (cause, recognition and treatment/management) a. Cancer b. Dermatophytes c. Psoriasis d. Human papilloma virus e. Type 1 herpes simplex f. Tinea pedis	
7	**<u>Skeletal System</u>** Learner Outcomes: A. Functions of the skeletal system B. Bone growth and formation C. Histology of bone D. Anatomy of a typical long bone E. Classification of bone based on shape F. Divisions of skeleton a. identification of bones in the axial and appendicular skeleton b. LAB: bone identification G. Joints a. Classification and mechanics of joints H. Injuries to the skeletal system a. Fractures i. How bones heal b. sprains i. mechanism and classification of sprains and ligament injuries c. Arthritis d. Skeletal and joint injuries in sport i. foot ii. ankle iii. knee iv. hip v. hand vi. elbow/forearm vii. shoulder viii. LAB: joint laxity testing and management	

8	**The Muscular System** Learner Outcomes: A. Function of muscular system B. Types and anatomy of muscle tissue a. Smooth/visceral b. Striated/skeletal c. Cardiac d. LAB: Muscle Tissue C. Physiology of muscular contraction a. Sliding filament theory b. Muscle twitch c. Muscle tone d. LAB: build a model of a sarcomere D. Muscle identification a. muscle name b. function c. location d. origin/insertion e. LAB: superficial muscle identification f. LAB: gross anatomy/cadaver muscle identification E. Muscle injuries in sport a. foot, ankle and lower leg b. knee/thigh c. hip/groin d. wrist/ hand e. elbow/forearm f. shoulder g. back h. LAB: Muscle testing and injury management	
9	**Nervous System and Spinal Cord** Learner Outcomes: A. Function of the nervous system B. Organization of nervous system a. Central/peripheral nervous system b. Afferent/efferent nerves c. Somatic/autonomic nervous system i. Sympathetic/parasympathetic nervous system C. The nerve and nerve impulse D. Spinal cord and spinal nerves a. Function and anatomy i. LAB: Dissection of cow spinal cord	

	E. Injuries to a. Spinal cord injuries b. Brachial plexus injuries F. LAB: testing reaction times G. LAB: testing reflexes	
10	**<u>Nervous System and the Brain</u>** Learner Outcomes: H. Anatomy and functions of the brain I. Cranial nerves J. LAB: Dissection of sheep brain K. Injuries to the brain a. Concussion b. Second impact syndrome c. Post-concussion syndrome d. LAB: assessment and management of concussions	
11	**<u>Cardiovascular System</u>** Learner Outcomes A. Anatomy of the heart and circulatory system. B. Functions of the heart and circulatory system. a. Blood pressure b. Heart rate i. LAB: Dissection of pig or sheep heart	
12	**<u>Respiratory System</u>** Learner Outcomes: A. Purpose of the respiratory system B. Anatomy and function of the upper respiratory system (nose, pharynx, larynx, trachea, bronchi) C. Anatomy and function of the lungs D. Process of ventilation a. LAB: build simple model of working lung E. Process of respiration (external, internal and cellular) F. LAB: multi-unit lab—Monitoring blood pressure, respiration and heart rate before, during and after exercise. Discussion regarding airway management. G. Diseases/abnormal conditions a. Recognition and treatment/management of i. Pneumothorax ii. Hemothorax iii. Asthma: include discussion regarding use of epi-pen iv. Pneumonia v. LAB: listening to lung sounds	

13	**<u>Lymphatic System</u>** Learner Outcomes: A. Function of the system and the structure and functions of the lymphatic vessels B. Immune response C. Organs of the lymphatic system a. Recognition and management of injury to the spleen	
14	**<u>Nutrition and Digestive System</u>** Learner Outcomes: A. Purpose of the digestive system B. Anatomy and function of the digestive system a. LAB: Digestive System C. Recognition and management of abdominal injuries in sport D. Essential nutrients a. Function b. RDA for essential nutrients during various stages life c. Where to obtain essential nutrients d. PROJECT: Oral presentations on essential nutrients e. PROJECT: Analysis of personal nutrition via food diary and use of USDA website	
15	**<u>Presentation of case studies assigned at the beginning of the year</u>**	
	Labs	
	LAB: CPR, Advanced Bleeding Control, Bloodborne Pathogens Certification	
	LAB: Universal precautions and the spread of disease: Students will use the "How Viruses Spread" lab activity to predict, observe and analyze how viruses travel through the population. While performing the lab, students will observe universal precautions such as wearing gloves and masks	
	LAB: Basic Terms: Students will rotate to multiple stations, each using a different strategy to demonstrate their knowledge of basic terms.	
	LAB: Assessing vital signs: Students will learn how to monitor a patient's temperature, pulse, blood pressure and respiration. Students will also watch a video on Mt. Everest to analyze how vital signs respond to cold and altitude.	
	LAB: Bone Identification: Students will rotate to various stations and identify bones and bony landmarks. In tact skeletons, disarticulated	

	skeletons will be used. Students will also use photographs and each other to identify superficial landmarks of bones.	
	LAB: Joint Laxity Testing and Management: Students will watch videos of sports injuries. They will analyze the video to predict what injury occurred as a result of the incident. They will then demonstrate to each other how they would evaluate the suspected injury.	
	LAB: Muscle Tissue: Students will use microscopes to identify slides of different muscle tissue.	
	LAB: The Sarcomere: Students will use common items to build a working model of a sarcomere.	
	LAB: Superficial Muscle Identification: Students will use pictures of athletes to identify muscles.	
	LAB: Cadaver Muscle Identification: Students will visit a cadaver lab at a local chiropractic college and identify tagged muscles on the dissected cadaver.	
	LAB: Muscle Testing and Injury Management: Students will use the knowledge of muscles and their functions to test the integrity of specific muscles	
	LAB: Dissection of Cow Spinal Cord: Students will use knowledge of spinal cord anatomy to identify specific structures of spinal cord.	
	LAB: Reaction Time: Students will use a ruler and a chart to determine each other's reaction time.	
	LAB: Testing Reflexes: Students will work in pairs. They will use a reflex hammer to evaluate the following reflexes: Biceps (C5), Brachioradialis (C6), Triceps (C7), Patellar tendon (L2, 3, 4), Achilles tendon (S1).	
	LAB: Dissection of Sheep Brain: Students will work in pairs to dissect a sheep's brain.	
	LAB: Assessment and Management of Concussions: Students will work in pairs to demonstrate the assessment of an athlete with a possible concussion. The student who is the "athlete" will have a script they will use to answer the questions asked by the examiner and to replicate the signs and symptoms of a concussion.	
	LAB: Dissection of Sheep or Pig Heart: Students will work in pairs to dissect either a pig or a sheep heart.	
	LAB: Model Lung: Students will use a water bottle, straw, and two balloons to build a simple model of the lung.	

	LAB: Multi-Unit Lab—Respiratory and Circulatory System: Students will work in small groups to observe how the circulatory and respiratory systems work together to maintain homeostasis during exercise. Students will take turns being the subject while the other members of the group take and record their vital signs (blood pressure, temperature and heart rate) at various intervals.	
	LAB: Lung Sounds: Students will work stethoscopes in small groups to practice listening to lung sounds. In addition to listening to each other's lung sounds, recorded lung sounds will be used.	
	LAB: Digestive system: Students will use a tagged cadaver (if available) or a model and pictures to identify tagged areas of the digestive system.	
	ACTIVITY: Case Study: Students will choose a person that has suffered a particular injury. The students will write a case study of that injury. Students will interview the person to gain specific information regarding their injury. They will then research to gain more information on the type of injury. Students will write a case study to include the following sections: introduction, presentation of the case (history, diagnosis, treatment, outcome), and conclusion. The case study will be started in the Tissue Unit, but will be worked on throughout the year. The project will culminate with an oral presentation of the case study to the class during the final week of school.	
	PROJECT: Essential Nutrients: Students will work in pairs to create a poster on one of the essential nutrients. The students will then present their poster to the class.	
	Total Approved Hours of Classroom Instruction	**240**
	<u>Community Classroom/Internship</u> **(Unpaid, on-the-job, training experience at business sites)** Community Classroom experiences may occur during the second semester of the course. During this time, students meet in the classroom for 2 hours a week on their Control Day. The other 8 required hours of class are completed at the community classroom/internship site. Learner Outcomes: A. Apply skills learned in class. B. Analyze information and make decisions. C. Communicate verbally and in writing. D. Work independently and as a team member in a diverse workplace. E. Work reliably, responsibly, and ethically.	Hours Spent in internship are determined by the number of days students are able to spend at their sites. *The ideal is to have students spend **120** or more hours in internship.*
	Total Hours	**360**

15. Instructional Strategies

lecture	Multimedia	Cooperative groups
group discussion	Guided practice	Guest speakers
brainstorming	Demonstration	Work-based learning
projects	Role-playing	Simulation
reading assignments	Job-shadowing	Oral report

16. Certificate Competency List:

Career Technical Skills:

- Identify various sports medicine professional careers
- Use related sports therapy medical terminology
- Identify human anatomy and physiology
- Classify sports injuries and phases of healing
- Describe therapeutic modalities and rehabilitation techniques for athletes
- Explain steps for proper handling of emergency situations
- Describe Techniques for injury assessment of an athlete
- Identify Universal Precautions to prevent the spread of infection
- List structure, injuries, and assessment of the ankle & lower leg, knee, thigh, hip, groin, pelvis, shoulder, elbow, forearm, wrist, hand, spine, thorax, abdomen, head, face, eyes, ears, nose, and throat
- Describe additional health concerns for athletes
- Identify environmental factors and risks
- Explain nutritional considerations for athletes