Course Title: Sports Medicine 1a/1b

State: TX
State Course Title: Kinesiology I
State Standards: Career and Technical Education
Date of Standards: 2020-2021

TEKS	Course Title (a or b), if applicable, e.g. Game Design 1a	Unit Name(s)	Lesson(s) Numbers
(1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:			
(A) express ideas in a clear, concise, and effective manner;	Sports Medicine 1a	Unit 1	Activity 2
(B) exhibit the ability to cooperate, contribute, and collaborate as a member of a team; and	Sports Medicine 1a	Unit 1	Activity 2
(C) identify employer expectations such as punctuality, attendance, time management, communication, organizational skills, and productive work habits.	Sports Medicine 1a	Unit 1	Activity 2
(2) The student demonstrates communication skills using the terminology applicable to the health science industry. The student is expected to:			
(A) demonstrate appropriate verbal and written strategies such as correct pronunciation of medical terms and spelling in a variety of health science scenarios;	Sports Medicine 1a	Unit 7	Discussion 2
(B) employ increasingly precise language to communicate; and	Sports Medicine 1a	Unit 7	Discussion 2
(C) translate technical material related to the health science industry.	Sports Medicine 1a	Unit 7	Discussion 2
(3) The student uses verbal and nonverbal communication skills. The student is expected to:			
(A) identify components of effective and non-effective communication;	Sports Medicine 1a	Unit 6	Activity 1
(B) demonstrate effective communication skills for responding to the needs of individuals in a diverse society;	Sports Medicine 1a	Unit 6	Activity 1

(C) evaluate the effectiveness of conflict-resolution techniques in various situations; and	Sports Medicine 1a	Unit 6	Activity 1
(D) accurately interpret, transcribe, and communicate medical vocabulary using appropriate technology.	Sports Medicine 1a	Unit 6	Activity 1
(4) The student implements the leadership skills necessary to function in a democratic society. The student is expected to:			
(A) identify traits of a leader;	Sports Medicine 1a	Unit 1	Activity 2
(B) demonstrate leadership skills, characteristics, and responsibilities of leaders such as goal setting and team building; and	Sports Medicine 1a	Unit 1	Activity 2
(C) demonstrate the ability to effectively conduct and participate in meetings.	Sports Medicine 1a	Unit 1	Activity 2
(5) The student discusses various careers in kinesiology-related fields, the diversity of knowledge that characterizes the field of kinesiology, and how societal changes have increased the demand for kinesiology graduates. The student is expected to:			
(A) compare the educational requirements for associate's, bachelor's, and master's degrees';	Sports Medicine 1a	Unit 1	Activity 2
(B) differentiate between a certification, registration, and licensure;	Sports Medicine 1a	Unit 1	Activity 2
(C) describe kinesiology-related careers by including a definition of the career, three duties, educational requirements, and employment opportunities; and	Sports Medicine 1a	Unit 1	Activity 2
(D) explain what changes in society have increased Kinesiology employment.	Sports Medicine 1a	Unit 1	Activity 2
(6) The student explains the importance of early exposure to physical activity for optimal growth, motor development, and physical literacy. The student is expected to:			
(A) define kinesiology and explain its importance of human motion;	Sports Medicine 1a	Unit 7	Activity 1
(B) define growth, motor development, and physical literacy and outline the various stages of development;	Sports Medicine 1a	Unit 7	Activity 1
(C) describe the various factors affecting optimal growth, motor development, and physical literacy across the life cycle; and	Sports Medicine 1a	Unit 7	Activity 1

(D) demonstrate an understanding of individual differences in growth and motor development and how they affect the design of movement-based activities.	Sports Medicine 1a	Unit 7	Activity 1
(7) The student examines the skeletal framework and its movements as the foundation for all movement. The student is expected to:			
(A) classify joints according to structure and explain the relationship between a joint structure and its capacity for movement;	Sports Medicine 1a	Unit 4	Discussion 2
(B) identify the factors, including joint structure, age and gender, and muscle size that contribute to joint range of motion (ROM) and stability;	Sports Medicine 1a	Unit 4	Discussion 2
(C) explain a joint's range of motion, evaluate the range, and describe desirable procedures for changing when indicated;	Sports Medicine 1a	Unit 4	Discussion 2
(D) define the orientation positions and planes of the body and the axes of motion, including sagittal, transverse, frontal; and	Sports Medicine 1a	Unit 4	Discussion 2
(E) demonstrate and name fundamental movement patterns using correct movement terminology.	Sports Medicine 1a	Unit 4	Discussion 2
(8) The student investigates the structure and function of the muscular system. The student is expected to:			
(A) describe the structure and properties of the whole muscle, fast and slow twitch muscle fibers, and themyofibril;	Sports Medicine 1b	Unit 1 and Unit 2	All lessons, and Unit 2/Activity 1
(B) define the roles a muscle may play such as agonist, antagonist, and synergist and explain the interdependence between them and their roles in a specified movement;	Sports Medicine 1b	Unit 1 and Unit 2	All lessons, and Unit 2/Activity 1
(C) define the types of muscular contraction, including concentric, eccentric, and static, and name and demonstrate each type of action; and	Sports Medicine 1b	Unit 1 and Unit 2	All lessons, and Unit 2/Activity 1
(D) analyze the force-velocity and length-tension relationships of muscular contraction and explain the significance of these relationships in static and dynamic movements.	Sports Medicine 1b	Unit 1 and Unit 2	All lessons, and Unit 2/Activity 1
(9) The student investigates the structure and function of the muscular system and describe the neuromuscular basis of human motion. The student is expected to:			
(A) define and describe the functions of the basic structures of the nervous system;	Sports Medicine 1b	Unit 2	Critical Thinking 1-5
(B) explain how graduations in strength of muscle contraction and precision of movement occur;	Sports Medicine 1b	Unit 2	Critical Thinking 1-5
(C) define the receptors that are important in musculoskeletal movement;	Sports Medicine 1b	Unit 2	Critical Thinking 1-5

(D) explain how the various receptors function and describe the effect each has on musculoskeletal movement;	Sports Medicine 1b	Unit 2	Critical Thinking 1-5
(E) describe reflex action and enumerate and differentiate among the reflexes that affect musculoskeletal action; and	Sports Medicine 1b	Unit 2	Critical Thinking 1-5
(F) demonstrate a basic understanding of volitional movement by describing the nature of the participation of the anatomical structures and mechanisms involved.	Sports Medicine 1b	Unit 2	Critical Thinking 1-5
(10) The student investigates the structure and function of the shoulder region. The student is expected to:			
(A) define, locate, and describe the structure and ligamentous reinforcements of the articulations of the shoulder region;	Sports Medicine 1b	Unit 7	Lessons 1 and 2, Critical Thinking Questions
(B) define and demonstrate the movements possible in the joints of the shoulder region;	Sports Medicine 1b	Unit 7	Lessons 1 and 2, Critical Thinking Questions
(C) define and locate the muscles and muscle groups of the shoulder region, and name their primary actions as agonists, stabilizers, neutralizers, or antagonists;	Sports Medicine 1b	Unit 7	Lessons 1 and 2, Critical Thinking Questions
(D) analyze the fundamental movements of the arm and trunk with respect to joint and muscle actions; and	Sports Medicine 1b	Unit 7	Lessons 1 and 2, Critical Thinking Questions
(E) describe the common injuries of the shoulder region.	Sports Medicine 1b	Unit 7	Discussion 1
(11) The student investigates the structure and function of the elbow, forearm, wrist, and arm. The student is expected to:			
(A) define, locate, and describe the structure and ligamentous reinforcements of the articulations of the elbow, forearm, wrist, and hand;	Sports Medicine 1b	Unit 7	Lessons 1 and 2, Critical Thinking Questions
(B) define and demonstrate the movements possible in the joints of the elbow, forearm, wrist, and hand regardless of starting position;	Sports Medicine 1b	Unit 7	Lessons 1 and 2, Critical Thinking Questions
(C) define and locate the muscles and muscle groups of the elbow, forearm, wrist, and hand, and name their primary actions as agonists, stabilizers, neutralizers, or antagonists;	Sports Medicine 1b	Unit 7	Lessons 1 and 2, Critical Thinking Questions
(D) analyze the fundamental movements of the forearm, hand, and fingers with respect to joint and muscle actions; and	Sports Medicine 1b	Unit 7	Lessons 1 and 2, Critical Thinking Questions
(E) describe the common athletic injuries of the forearm, elbow, wrist, and fingers.	Sports Medicine 1b	Unit 7	Discussion 1
(12) The student investigates the structure and function of the hip region. The student is expected to:			

(A) define, locate, and describe the structure and ligamentous reinforcements of the articulations of the pelvic girdle and hip joint;	Sports Medicine 1b	Unit 8	Activity 1, Lessons 1 and 2
(B) define and demonstrate the movements possible in the pelvic girdle and hip joint, regardless of starting position;	Sports Medicine 1b	Unit 8	Activity 1, Lessons 1 and 2
(C) define and locate the muscles and muscle groups of the pelvis and hip, and name their primary actions as agonists, stabilizers, neutralizers, or antagonists;	Sports Medicine 1b	Unit 8	Activity 1, Lessons 1 and 2
(D) analyze the fundamental movements of the pelvis and thigh with respect to joint and muscle actions; and	Sports Medicine 1b	Unit 8	Activity 1, Lessons 1 and 2
(E) describe the common athletic injuries of the pelvis, hip, and thigh.	Sports Medicine 1b	Unit 8	Activity 1, Lessons 1 and 2
(13) The student investigates the structure and function of the knee, ankle, and foot. The student is expected to:			
(A) define, locate, and describe the structure and ligamentous reinforcements of the articulations of the knee, ankle, and foot;	Sports Medicine 1b	Unit 8	Activity 1, Lessons 1 and 2
(B) define and demonstrate the movements possible in the knee, ankle, and foot, regardless of starting position;	Sports Medicine 1b	Unit 8	Activity 1, Lessons 1 and 2
(C) define and locate the muscles and muscle groups of the knee, ankle, and foot, and name their primary actions as agonists, stabilizers, neutralizers, or antagonists;	Sports Medicine 1b	Unit 8	Activity 1, Lessons 1 and 2
(D) analyze the fundamental movements of the knee, ankle, and foot with respect to joint and muscle actions; and	Sports Medicine 1b	Unit 8	Activity 1, Lessons 1 and 2
(E) describe the common athletic injuries of the knee, ankle, and foot.	Sports Medicine 1b	Unit 8	Activity 1, Lessons 1 and 2
(14) The student investigates the structure and function of the spinal column and thorax. The student is expected to:			
(A) locate, and describe the structure and ligamentous reinforcements of the articulations of the spinal column and thorax;	Sports Medicine 1b	Unit 5	Critical Thinking Questions and Activity 1 and 2
(B) define and demonstrate the movements possible in the joints of the spinal column and thorax including the muscles and muscle groups regardless of starting position;	Sports Medicine 1b	Unit 5	Critical Thinking Questions and Activity 1 and 2
(C) analyze the fundamental movements of the spinal column and thorax with respect to joint and muscle actions; and	Sports Medicine 1b	Unit 5	Critical Thinking Questions and Activity 1 and 2
(D) describe the common injuries of the spinal column and thorax.	Sports Medicine 1b	Unit 5	Activity 3

(15) The student examines the fundamental principles of biomechanics, take measurements, and perform calculations. The student is expected to:			
(A) compare the terms mechanics and biomechanics and explain the difference;	Sports Medicine 1a	Unit 7	Activity 1, 2 and 3
(B) define the terms kinematics, kinetics, statics, and dynamics, and state how each relates to the structure of biomechanics of study; and	Sports Medicine 1a	Unit 7	Activity 1, 2 and 3
(C) solve problems that identify different units of measurement related to kinesiology.	Sports Medicine 1a	Unit 7	Discussion 2
(16) The student demonstrates knowledge of the skeletomuscular and neuromuscular mechanisms involved in the standing position. The student is expected to:			
(A) identify the physiological functions of the skeletomuscular and neuromuscular systems in regard to standing posture;	Sports Medicine 1b	Unit 5	Critical Thinking Questions and Activity 1 and 2
(B) discuss the role of genetics and lifestyle choices on the effects of our skeletomuscular and neuromuscular systems in relation to standing posture;	Sports Medicine 1b	Unit 5	Critical Thinking Questions and Activity 1 and 2
(C) distinguish the factors that affect stability and energy cost of the erect position; and	Sports Medicine 1b	Unit 5	Critical Thinking Questions and Activity 1 and 2
(D) analyze the posture of individuals of different ages and body builds using static and dynamic movements such as overhead squat assessment.	Sports Medicine 1b	Unit 5	Critical Thinking Questions and Activity 1 and 2
(17) The student describes the fundamentals of human motion. The student is expected to:			
(A) identify the kinds of motion experienced by the human body and describe the factors that cause and modify motions;	Sports Medicine 1a	Unit 7	Activity 1
(B) create a scenario that uses the terms that describe linear and rotary motion: position, displacement, distance, speed, velocity, and acceleration; and	Sports Medicine 1a	Unit 7	Activity 1
(C) describe the relationship between linear and rotary movement and explain the significance of this relationship to human motion.	Sports Medicine 1a	Unit 7	Activity 1
(18) The student demonstrates knowledge of a selected motor skill, breaking down into component phases and identifying starting and ending points. The student is expected to:			
(A) identify the muscle groups active in a variety of motor skills;	Sports Medicine 1a	Unit 7	Activity 2
(B) analyze the joint actions and planes of motion for a selected motor skill by observing and recording via video dynamic movement patterns;	Sports Medicine 1a	Unit 7	Activity 2

(C) explain the skill acquisition process and describe the stages of learning a skill;	Sports Medicine 1a	Unit 7	Activity 2
(D) describe the types of feedback and their roles in skill learning; and	Sports Medicine 1a	Unit 7	Activity 2
(E) design a learning environment using effective practice methods.	Sports Medicine 1a	Unit 7	Activity 2