



# Sports Medicine & Kinesiology

## Course Outline

### Course Description

This 519 hour course is a practical study of the procedures for the evaluation and treatment of injuries within the athletic environment. Additional emphasis is given in regards to preventative measures and objective assessment of theories and techniques associated with the care and prevention of athletic injuries. The course is designed to give students a broad overview of the careers and coursework associated with sports medicine. Coursework will incorporate topics which will include, but not limited to, anatomy, medical terminology, nutrition, injury recognition and prevention.

### Course Details

**Length of Program and Academic Credits Earned:**

Year-long 3 hour course = 519 hours total (~261/semester)

30 total units (15/semester):

- 20 non-a–g elective credits (10/semester)
- 10 UC “d” elective credits (5/semester)

**Pre-Requisites:**

- High School Junior or Senior, or 16 years or older
- Completed Anatomy/Physiology and/or Biology with C or better

**CTE Classification:**

- **Industry Sector:** Health Science and Medical Technology
- **Industry Pathway:** Patient Care
- **CA Basic Education Data System (CBEDS) Code:** 4284

**Work-Based Learning:**

Students meeting certain criteria may be offered internship placement with local sports medicine departments/clinics.

**Certifications & State Tests:**

- Adult, Child and Infant CPR
- Adult, Child and Infant AED
- BloodBorne Pathogens
- SVCTE Certificate of Completion awarded with “C” or better average for both semesters.

## Possible Education & Career Pathways

College & Career Pathways:	Career Opportunities	O*NET Codes
<u>Post-Secondary:</u> Students with a high school diploma and having successfully completed this course have a number of entry-level career opportunities, as well as continuing their education.	<ul style="list-style-type: none"> <li>● Occupational Therapist Aide</li> <li>● Personal Trainer</li> <li>● Physical Therapist Aide</li> </ul>	31-2012.00 39-9031.00 31-2022.00
<u>Community College Majors &amp; Degrees:</u> <ul style="list-style-type: none"> <li>● AA or AS in Kinesiology</li> </ul>	<ul style="list-style-type: none"> <li>● Coach</li> <li>● Occupational Therapist Assistant</li> <li>● Physical Therapist Assistant</li> <li>● Massage Therapist</li> <li>● Surgical Technologist</li> </ul>	27-2022.00 31-2011.00 31-2021.00 31-9011.00 29-2055.00
<u>University Majors &amp; Degrees:</u> <ul style="list-style-type: none"> <li>● BA or BS in Kinesiology, Exercise Biology and/or Athletic Training</li> </ul>	<ul style="list-style-type: none"> <li>● Athletic Trainer</li> <li>● Exercise Physiologist</li> <li>● Kinesiotherapist</li> </ul>	29-9091.00 29-1128.00 29-1129.000
<u>Post-Baccalaureate Degrees</u> <ul style="list-style-type: none"> <li>● MS in Kinesiology, Athletic Training</li> <li>● DPT in Physical Therapy</li> <li>● MD in Medicine</li> </ul>	<ul style="list-style-type: none"> <li>● Athletic Trainer</li> <li>● Occupational Therapist</li> <li>● Physical Therapist</li> <li>● Physician</li> </ul>	29-9091.00 29-1122.00 29-1123.00 29-1069.00

**Unit 1: Introduction to Anatomy and Kinesiology** **92 hours**

Students will learn basic terminology and language associated with anatomy and kinesiology, describe how the organ systems function and interrelate, identify specific bones, landmarks, origins/insertions/actions, joint structures, nerves, vessels and organs, understand the functions of the musculoskeletal system in producing and controlling human movement and understand the basic biomechanical principles which govern human movement.

- Bones, muscles and organs
- Ligaments, cartilage and joints
- Joint motions
- Organ systems
- Planes of movement
- Medical terminology

**Standards Alignments:**

**CCSS:** LS 11-12.1, 11-12.6

**NGSS:** LS 1.A, 1.B

Key Assignments	CTE Anchor Standards	CTE Pathway Standards
<p>✓ <b>Key Assignment:</b> Students will work in lab groups on multiple occasions to dissect a cow’s eye, sheep’s heart and sheep kidney. Using a dissection manual, they will use a variety of lab equipment to identify and label all parts of the organ, generate a lab report to complete including short answer questions and write a narrative summary of their findings.</p> <p><b>Assessment:</b> lab report rubric, student observation of group interaction</p>	2.1, 5.1, 9.3	B 2.1
<p>✓ <b>Key Assignment:</b> Students will read about the different parts of the brain and summarize the function of each part. They will use this information to individually create their own brain cap, label all of the individual brain parts, their function and color code. These brain caps will be displayed in classroom as a reference.</p> <p><b>Assessment:</b> quiz, oral questioning</p>	1.0, 10.1, 11.1	B 2.1, B 5.2

**Unit 2: Legal Concerns and Medical Ethics** **20 hours**

Students will analyze the legal and ethical considerations for a sports medicine professional, identify measures to minimize the chance of litigation, classify the types of insurance and research the the health care laws that affects patient care.

- Legal terminology
- Avoiding legal problems

- HIPAA
- Ethical practices
- Documentation

**Standards Alignments:**

**CCSS:** RRLST 11-12.7, 11-12.9; **WS** 11-12.1, 11-12.2

**NGSS:** SEP 1, 3, 4, 6, 7, 8; **CC** 2

Key Assignments	CTE Anchor Standards	CTE Pathway Standards
<p>✓ <b>Key Assignment:</b> Students will individually research a controversial medical case of their choice, choose a position of “pro or con,” write a persuasive argument essay to include a thesis statement, supporting evidence, citations, counter argument and a solid conclusion after multiple edits/revisions considering teacher and peer feedback. The students will present their findings to the class, answer questions from peers and justify their choices.</p> <p><b>Assessment:</b> persuasive essay, oral presentation, rubric</p>	4.1, 5.1, 5.4, 8.3	B 5.2, B 12.1
<p>✓ <b>Key Assignment:</b> Working in groups, students will research a controversial medical case chosen by instructor. They will prepare an argument for pro or con viewpoint, construct note cards with poignant data and participate in a class debate highlighting and defending their position, evidence and claim. The peer audience will complete a rubric to offer additional feedback to the presenters.</p> <p><b>Assessment:</b> debate rubric, peer feedback, observation of professionalism during the debate</p>	4.1, 5.1, 5.4, 8.3	B 5.2, B 12.1

**Unit 3: Careers in Sports Medicine and Professional Readiness** **20 hours**

Students will explore careers in the field of sports medicine and will develop personal and professional skills in the classroom that will transfer to the workplace.

- Time management and organization
- Interpersonal skills
- Career exploration
- Job search skills including: resume, job applications and effective interview skills

**Standards Alignments:**

**CCSS:** LS 11-12.1, RRLST 11-12.9; **WS** 11-12.2, 11-12.4; **WHSST** 11-12.10

Key Assignments	CTE Anchor Standards	CTE Pathway Standards

<p>✓ <b>Key Assignment:</b> Student will participate in mock interviews with industry professionals, peers and instructors to increase their communication, interpersonal and employability skill-set.</p> <p><b>Assessment:</b> rubric, observation of role playing, peer and self- assessment</p>	2.1, 2.2, 2.3, 3.1, 3.2	
<p>✓ <b>Key Assignment:</b> Students will prepare a portfolio including a cover letter and resume through workshop, self and peer editing, teacher instruction and demonstration.</p> <p><b>Assessment:</b> rubric, observation, peer and self- assessment</p>	3.1, 3.2, 3.9	
<p>✓ <b>Key Assignment:</b> Students will research career options, educational requirements, and roles related to the sports medicine field. Students will individually produce and present a PowerPoint presentation and research paper reflecting their potential career path findings.</p> <p><b>Assessment:</b> rubric, peer feedback, student editing before and after feedback and self-reflection</p>	2.4, 3.4, 4.1	B 5.0, B 5.2, B 12.0, B 12.3

<b>Unit 4: Fitness and Conditioning</b>	<b>33 hours</b>
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Students will analyze specific fitness techniques and principles for improving cardiorespiratory endurance, muscular strength and flexibility, apply the concept of periodization in the design of fitness programs and understand the essential components of an effective fitness program.

- Basic components of fitness program
- Fitness principles
- Strength, endurance, and power
- Periodization
- Fitness program design

**Standards Alignments:**  
**CCSS:** LS 11-12.6; RRLST 11-12.3  
**NGSS:** SEP 1, 3, 4, 6, 7, 8; LS 2.D; CC 2

Key Assignments	CTE Anchor Standards	CTE Pathway Standards
<p>✓ <b>Key Assignment:</b> Students will individually conduct a pre-participation baseline exam on a student peer from the Law Enforcement and Fire Science program on campus. They will record baseline measurements such as vitals (blood pressure, heart rate, breaths per minute, temperature) and fitness metrics (push-ups, sit-ups, balance, T-test for agility) on their assigned student to set goals and monitor improvements.</p> <p><b>Assessment:</b> patient care checklist, and observation of patient interaction</p>	6.5, 11.1	B 1.4, B 2.1, B 9.1
<p>✓ <b>Key Assignment:</b> As a class lead by peer team leaders, students will design and implement exercise programs to address fitness needs and goals of the students of the Law Enforcement and Fire Science program on campus. The programs created must</p>	6.5, 9.3, 11.1	B 2.1, B 9.1

<p>include patient limitations, modified exercises of varying levels, number of rotations and equipment usage. Each student will advocate for their own patient’s needs during the group planning.</p> <p><b>Assessment:</b> fitness program write-up, individual patient goal assessment, and observation of patient interaction</p>		
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<b>Unit 5: Off the Field Injury Evaluation</b>		<b>70 hours</b>
<p>Students will explore the various factors that influence the type and severity of athletic injuries, evaluate athletic injuries using a systematic approach and explain the different methods and reasons for documenting injuries.</p> <ul style="list-style-type: none"> <li>● Injury recognition</li> <li>● Injury documentation</li> <li>● Injury evaluation process</li> <li>● Progress notes</li> </ul> <p><b>Standards Alignments:</b>  <b>CCSS:</b> LS 11-12.1, 11-12.2; <b>RRLST</b> 11-12.3  <b>NGSS:</b> SEP 1, 3, 4, 6, 7, 8; <b>LS</b> 1.A; <b>CC</b> 4</p>		
Key Assignments	CTE Anchor Standards	CTE Pathway Standards
<p>✓ <b>Key Assignment:</b> Using an instructor provided evaluation checklist, students will individually evaluate various musculoskeletal and systemic injuries incorporating the learned evaluation methodology. They will examine the peer patient, gather patient history and decide upon which measurements and tests are appropriate to diagnose the simulated injury and conduct a practical examination with appropriate patient interaction.</p> <p><b>Assessment:</b> evaluation checklist, practical examination observation, and patient interaction observation, self-reflection, conferencing</p>	11.1	B 2.1, B 4.1, B 4.3
<p>✓ <b>Key Assignment:</b> Following their practical exam scenarios, students will individually document various musculoskeletal and system injuries in accordance with established industry standards. They will document the injury in a SOAP (Subjective, Objective, Assessment, Plan) note format to include narrative writing and bullet point documentation.</p> <p><b>Assessment:</b> SOAP Notes, preparticipation examinations checklist</p>	10.1, 11.1	B 2.1, B 4.5, B 5.4

## Unit 6: Prevention, Rehabilitation and Therapeutic Exercise

80 hours

Students will explore the components of a rehabilitation program, design rehabilitation programs and exercise prescriptions based on the phases of healing, understand the consequences of sudden inactivity and injury immobilization, and create exercise prescriptions to reduce the chances of injury and/or re-injury.

- Components of rehabilitation program
- Phases of healing
- Effects of inactivity and immobilization
- Exercise prescriptions
- Therapeutic modalities

### Standards Alignments:

**CCSS:** LS 11-12.1; **RSIT** 11-12.7; **RRLST** 11-12.4, 11-12.3; **WS** 11-12.6, 11-12.7

**NGSS:** SEP 1, 2, 3, 4, 6, 7, 8; **LS** 1.A; **CC** 1, 4

Key Assignments	CTE Anchor Standards	CTE Pathway Standards
<p>✓ <b>Key Assignment:</b> Working in collaborative groups, students will research a professional athlete’s injury, document the injury in a SOAP (Subjective, Objective, Assessment, Plan) note format to include narrative writing and bullet point documentation, compare two rehabilitation protocols, as well as design a rehabilitation and prevention program.</p> <p><b>Assessment:</b> SOAP note, rehabilitation program rubric, prevention program rubric, teacher and group conference</p>	4.1, 5.1, 9.3	B 1.2, B 5.1, B 9.6
<p>✓ <b>Key Assignment:</b> Building upon their research project, students will orally present their final products (Athlete’s Injury, SOAP Note, Rehabilitation and Prevention Program) to an expert panel describing and defending their proposals and claims. Presentations may include but are not limited to a poster, PowerPoint, magazine, and/or video.</p> <p><b>Assessment:</b> presentation rubric, peer feedback sheet, group feedback sheet</p>	2.5, 9.7	B 1.4, B 5.1, B 8.1

## Unit 7: On the Field Acute Care and Emergency Procedures

21 hours

Students will explore the roles of personnel during an emergency situation, understand the components and importance of a written emergency action plan and identify the difference between a medical and non medical emergency situation.

- Emergency action plan (EAP) components
- Primary survey

- Importance of an EAP

- Spineboarding
- Types of emergency situations

**Standards Alignments:**

**CCSS:** LS 11-12.1; RSIT 11-12.7; RRLST 11-12.7

**NGSS:** SEP 1, 2, 3, 4, 5, 6, 7, 8

Key Assignments	CTE Anchor Standards	CTE Pathway Standards
<p>✓ <b>Key Assignment:</b> Working in teams, students will choose a local high school, create an emergency action plan (EAP) for that school’s athletic facilities including personnel, emergency room location, map of school, school access, medical equipment on site (AED, stretcher, etc), and create a compare and contrast diagram to compare their EAP proposal with the established EAP at their chosen high school. Teams will include a narrative offering suggestions for improvement to the school plan.</p> <p><b>Assessment:</b> emergency action plan document, compare and contrast diagram</p>	4.1, 5.4, 6.5, 6.6	B 8.2, B 12.2
<p>✓ <b>Key Assignment:</b> Instructor will provide students with various emergency scenarios that may take place on an athletic field which may include: injury evaluation, activation of EMS, spine boarding, and monitoring vitals. Students will role play these scenarios, complete a patient exam using the emergency checklist (check for airway breathing, circulation, severe bleeding and take vitals) for each scenario and write a reflective journal to capture their thoughts.</p> <p><b>Assessment:</b> emergency scenarios checklist, observation of role playing and self reflection, peer and instructor feedback</p>	2.1, 5.2, 6.5, 6.6, 7.3, 7.4	B 4.1, B 8.2, B 8.3

**Unit 8: Bloodborne Pathogens, CPR, AED and Essential First Aid 18 hours**

Students will be introduced to bloodborne pathogens and how to protect themselves and others from being exposed to blood or blood-containing materials. Students will learn emergency first aid and techniques. Students acquire knowledge and skills necessary for dealing with emergencies within the athletic setting.

**Blood Borne Pathogens**

- How to react in an emergency
- Contacting 911
- Legal issues

**CPR/AED**

- How to react in an emergency
- Contacting 911
- Overview of the AED and its use

**Essential First Aid**

- First aid
- Burn care (thermal, chemical and electrical)



- What are bloodborne pathogens
- Means of transmission
- Prevention of bloodborne pathogens
- Universal precautions
- Exposure control plan
- The Use of biohazard labels and container color coding
- Hepatitis B vaccine
- Engineering controls
- Post exposure follow-ups

- The Chain of survival
- Medical and legal issues
- The AED/CPR algorithm
- Preparing and managing the AED event
- AED troubleshooting service, and maintenance
- Signs, symptoms, care of heart attack
- Signs, symptoms, care of stroke
- CPR for people age 8 and older
- CPR for people age 1- 8
- CPR for infants up to 1-year old
- Heimlich maneuver for all ages

- Musculoskeletal
- Stroke
- Diabetic emergencies
- Seizures
- Asthma attacks
- Anaphylactic shock
- Heat emergencies

**Standards Alignments:**

**CCSS: RSIT 11-12.7; RRLST 11-12.3; AD 12.2**

**NGSS: LS 2.D**

Key Assignments	Anchor Standards	Pathway Standards
<p>✓ <b>Key Assignment:</b> The students will participate in a Blood Borne Pathogen training. After successful completion of this course, the students will understand what bloodborne pathogens are and how risks of exposure can be reduced for themselves and others and will receive a certification which adheres to the training requirements of the U.S. Department of Labor, OSHA Bloodborne Pathogens Standard (29 CFR 1910.1030).</p> <p><b>Assessment:</b> test</p>	6.5, 6.6	B 10.3, B 11.4, B 12.4
<p>✓ <b>Key Assignment:</b> Students will participate in CPR/AED training that satisfies the requirements of the Occupational Safety &amp; Health Administration (OSHA) and leads to certification upon successful completion. Course covers Infant, Child, and Adult CPR. Students will engage in hands on practice with an AED trainer.</p> <p><b>Assessment:</b> instructor observation and feedback, test</p>	6.5, 6.6, 10.5	B 12.4
<p>✓ <b>Key Assignment:</b> Student will participate in First aid Training which covers the recognition and treatment for illness and injuries. This class satisfies the requirements of the Occupational Safety &amp; Health Administration (OSHA). Upon successful completion of the course, students will receive a First Aid Certification</p>	6.5, 6.6, 10.5	B 10.3, B 12.4

card. <b>Assessment:</b> instructor observation and feedback, test		
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<b>Unit 9: Protective Equipment, Wrapping and Taping Techniques</b>	<b>25 hours</b>
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Students will demonstrate the ability to apply elastic tape, nonelastic tape and elastic wraps to provide support, limit range of motion or hold a protective pad in place for an injured body part. Students will explain the importance of taping and wrapping in athletics and when to implement the various taping and wrapping techniques.

- Types of tape
- Correct application of tape, wrapping and protective equipment
- Supplies needed to apply and remove tape
- Indications and contraindications

**Standards Alignments:**  
**CCSS:** LS 11-12.1  
**NGSS:** LS 1.B

Key Assignments	CTE Anchor Standards	CTE Pathway Standards
<p>✓ <b>Key Assignment:</b> Using an instructor provided competency checklist, students will individually demonstrate proper wrapping and taping techniques (shoulder, elbow, wrist, hand, hip, knee, ankle, foot) along with constructing protective equipment (mouth guard, pad) for the upper and lower extremities. Students will randomly select two injuries, describe to the instructor the taping, wrapping and/or protective equipment that should be applied to prevent further injury and then perform the technique on a peer patient with simulated injury. They will additionally provide a written description of their process.</p> <p><b>Assessment:</b> Instructor observation, competency checklist, student conference</p>	2.5, 5.4, 11.1	B 2.1, B 7.4, B 8.5, B 9.1

<b>Unit 10: Nutrition</b>	<b>27 hours</b>
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Students will learn the six classes of nutrients and their function and explain the importance of good nutrition in enhancing performance and preventing injuries. Students will gain an understanding of how proper and improper food intake affects overall well-being and health.

- Basic nutrients
- Food labels
- Meal plans

<ul style="list-style-type: none"> <li>• Proper nutrient timing</li> </ul> <p><b>Standards Alignments:</b>  <b>CCSS: LS 11-12.1; RSIT 11-12.7; RRLST 11-12.7; WS 11-12.4</b>  <b>NGSS: LS 1.B</b></p>		
Key Assignments	CTE Anchor Standards	CTE Pathway Standards
<p>✓ <b>Key Assignment:</b> Students will record their own food consumption for five consecutive days in a food journal, calculate caloric needs, compare food consumption to caloric needs and recommend dietary changes based on nutritional goals. After the fifth day, students will write an essay analyzing their findings and propose changes to their eating habits.</p> <p><b>Assessment:</b> Food journal, rubric, checklist</p>	5.4, 10.3	B 9.1, B 9.2, B 9.5
<p>✓ <b>Key Assignment:</b> Students will research an athlete including their demographics, sport, pre-existing medical conditions, and current food consumption in order to create a meal plan based on athlete’s caloric needs, weight management and athletic performance goals. They will document the suggested meal plan in a chart form with narrative comments.</p> <p><b>Assessment:</b> meal plan, rubric, checklist, instructor check-ins</p>	4.1, 4.3, 10.3	B 9.1, B 9.2, B 9.5

<b>Unit 11: Pharmacology, Drugs and Sports</b>		<b>15 hours</b>
<p>Students will analyze pharmacokinetics relative to absorption, distribution, metabolism and excretion. Students will categorize the various drugs that can be used for therapeutic purposes, explore the problem of substance abuse and improper usage of drugs in the athletic population, and evaluate drug-testing policies and procedures along with recognition of banned drugs in sports.</p> <ul style="list-style-type: none"> <li>• Defining drugs</li> <li>• Therapeutic vs. recreational drugs</li> <li>• Performance enhancing drugs</li> <li>• Banned substances</li> </ul> <p><b>Standards Alignments:</b>  <b>CCSS: LS 11-12.1; 11-12.6; RRLST 11-12.4, 11-12.7; WS 11-12.6</b>  <b>NGSS: PS 1.B</b></p>		
Key Assignments	CTE Anchor Standards	CTE Pathway Standards

<p>✓ <b>Key Assignment:</b> Students will choose from a list of performance enhancing drugs and individually research: physiological purpose of the drug, how it works, how it is administered, long and short term effects, why it is used, legal status in North America and sporting world. Using this information, they will create a pamphlet or brochure to inform the public of the risks associated with the drug. The students will all share brochures/pamphlets to learn about a variety of performance enhancing drugs and engage in robust discussion generated from the variety of drugs researched.</p> <p><b>Assessment:</b> writing checkpoints, checklist, teacher feedback, class discussion,</p>	4.1, 4.3, 10.3	B 5.2, B 9.2
<p>✓ <b>Key Assignment:</b> Working in collaborative groups, students will research a professional athlete of their choice from a teacher provided list. They will identify the performance enhancing drug used, offer detailed description of the athlete’s usage including metabolic and physiological effects, side effects and reasons the drug was used. Students will compare the athlete’s career before and after the drug use and appraise how society views this athlete today and how their league is dealing with the use of this drug. Students will design a five minute oral presentation to include either a PowerPoint, essay, video or poster to support their presentation.</p> <p><b>Assessment:</b> oral presentation rubric, peer review feedback, visual product</p>	4.1, 4.3, 9.3, 10.3	B 5.2, B 9.6

<b>Unit 12 General Medical Conditions in Sports Medicine</b>		<b>83 hours</b>
<p>Students will explore illness/condition recognition, assessment, differential diagnosis, referral, treatment of various diseases and conditions that occur in sports. The various diseases and conditions are as following:</p>		
<ul style="list-style-type: none"> <li>● Head, face, eyes, ears and throat injuries</li> <li>● Thorax and abdomen injuries</li> <li>● Skin disorders</li> </ul>	<ul style="list-style-type: none"> <li>● Viral infections</li> <li>● Bacterial infections</li> <li>● Communicable diseases</li> </ul>	<ul style="list-style-type: none"> <li>● Respiratory conditions</li> <li>● Cardiovascular disease</li> <li>● Nervous System disorder</li> </ul>
<p><b>Standards Alignments:</b></p>		
<p><b>CCSS:</b> LS 11-12.1, 11-12.6; <b>RRLST</b> 11-12.4, 11-12.7; <b>WS</b> 11-12.6; <b>AD</b> 12.2.4</p>		
<p><b>NGSS:</b> LS 1.B</p>		
<b>Key Assignments</b>	<b>CTE Anchor Standards</b>	<b>CTE Pathway Standards</b>

<p>✓ <b>Key Assignment:</b> Students will work in partners to investigate and research a medical condition of their choice from a list provided by the instructor. They will collect information on the causes, signs/symptoms, treatment, lifestyle, prevention and prognosis of their chosen condition. In front of an audience, the students will role play the patient/clinician visit where the patient informs clinician of signs and symptoms of their ailment, in turn the student role playing as the clinician will utilize previous knowledge gained during research to perform exam, informs patient of suspected condition or disease and informs patient of next steps. Audience will provided feedback and team will answer any questions provided by their audience. In addition, team will produce a user-friendly pamphlet that demonstrates their knowledge of the disease and could be used to inform the public of prevention and prognosis.</p> <p><b>Assessment:</b> peer feedback, clinician and patient interaction rubric, instructor observation, brochure rubric</p>	<p>1.0, 2.1, 2.3. 2.8, 4.1, 5.1, 9.7</p>	<p>B 2.1, B 2.3, B 4.1, B 12.3</p>
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<b>Unit 13: Sports Psychology</b>	<b>15 hours</b>
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Students will explore various psychological principles associated with sport, learn and discuss psychological variables that can hinder athletic performance, as well as, which variables can enhance performance and create solutions to challenges sport participants experience with stress, anxiety, and arousal.

- Sports psychology terms: motivation, stress, coping, anxiety, focus and concentration
- Coping and recovering from injuries
- Psychological conditions and disorders
- Goal setting
- Eating disorders

**Standards Alignments:**

**CCSS:** LS 11-12.2; **RSLST** 11-12.4; **WHSST** 11-12.7

**NGSS:** LS 1.B

Key Assignments	CTE Anchor Standards	CTE Pathway Standards
<p>✓ In groups, students will choose a psychological barrier that often impacts an athlete’s performance on and off the field and investigate the topic. They will identify the indicators or “red flags.” Acting as a clinician students should recognize and provide a proposal for intervention to address the barrier. Each team will create their choice of a poster or video to inform the public of the psychological barriers that impact an athlete.</p> <p><b>Assessment:</b> peer feedback, poster or video checklist, teacher conference</p>	<p>2.5, 4.1, 5.1</p>	<p>B 6.3, B 7.2, B 9.1</p>

## Instructional Materials

Textbooks:	Electronic Media/Supplemental Print Materials/ Online Resources:
<ul style="list-style-type: none"> <li>● <b>Introduction to Sports Medicine and Athletic Training</b>, 2<sup>nd</sup> Edition Robert C. France - Delmar Cengage Learning © 2011 ISBN - 978-1435464360</li> <li>● <b>Workbook: Sports Medicine and Athletic Training &amp; Fitness Instruction</b> 2<sup>nd</sup> Edition Thomas Jim Clover - Delmar Learning © 2007 ISBN - 978-1133281252</li> </ul>	<ul style="list-style-type: none"> <li>● <i>American Trauma Event Management Training Manual</i></li> <li>● Impact Testing</li> <li>● Anatomy Arcade</li> </ul>

## Standards Assessed in this Course

### CTE Anchor Standards

- 1.0 Academics: Academics standards are aligned to pathways; see below.
- 2.0 Communications: Acquire and use accurately 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 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 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 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 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.
- 10.0 Technical Knowledge and Skills: Apply essential technical knowledge and skills common to all pathways in the sector following procedures when carrying out experiments or performing technical tasks.

### **Health Science and Medical Technology Sector — Patient Care Pathway Standards**

#### **B 1.0 Recognize the integrated systems approach to health care delivery services: prevention, diagnosis, pathology, and treatment**

- B 1.1 Know relationship and use of an integrated healthcare delivery system.
- B 1.2 Understand the range between prevention, diagnosis, pathology, and treatment procedures.
- B 1.3 Understand the significance of nontraditional approaches to health care in relationship to delivery systems.
- B 1.4 Illustrate the value of preventive and early intervention in relationship to health care practices.
- B 1.5 Describe the importance of reimbursement systems in relationship to the delivery of patient care.
- B 6.5 Report patient’s progress and response to treatment goals.
- B 6.6 Maintain written guidelines of the Health Insurance Portability and Accountability Act (HIPAA) in all communications.

#### **B2.0 Understand the basic structure and function of the human body and relate normal function to common disorders.**

- B 2.1 Know basic human body structure and function in relationship to specific care between prevention, diagnosis, pathology, and treatment.
- B 2.2 Describe basic stages of growth and development. B2.3 Recognize common disease and disorders of the human body.
- B 2.4 Compare normal function of the human body to the diagnosis and treatment of disease and disorders.

#### **B 3.0 Know how to apply mathematical computations used in health care delivery system.**

- B 3.1 Apply mathematical computations related to health care procedures (metric and household, conversions and measurements).
- B 3.2 Analyze diagrams, charts, graphs, and tables to interpret health care results.
- B 3.3 Record time using the 24-hour clock.

#### **B4.0 Recognize and practice components of an intake assessment relevant to patient care.**

- B4.1 Conduct basic interview to acquire new knowledge (e.g., medical and family histories).
- B4.2 Identify and summarize major life events as they impact health care practices and patient outcomes.
- B4.3 Observe patient actions, interests, and behaviors while documenting responses.
- B4.4 Collect and synthesize information or data about the patient’s symptoms and vital signs.
- B4.5 Evaluate information gathered and connect patient data to appropriate system of care.

#### **B5.0 Know the definition, spelling, pronunciation, and use of appropriate terminology in the healthcare setting.**

- B5.1 Use medical terminology in patient care appropriate to communicate information and observations.
- B5.2 Accurately spell and define occupationally specific terms related to health care.
- B5.3 Use roots, prefixes, and suffixes to communicate information.
- B5.4 Use medical abbreviations to communicate information.
- B5.5 Know the basic structure of medical terms.

- B5.6 Demonstrate the correct pronunciation of medical terms.
- B5.7 Practice word building medical terminology skills.
- B6.0 Communicate procedures and goals to patients using various communication strategies to respond to questions and concerns.**
- B6.1 Observe and document the ability of patients to comprehend and understand procedures and determine how to adjust communication techniques.
- B6.2 Use active listening skills (e.g., reflection, restatement, and clarification) and communication techniques to gather information from the patient.
- B6.3 Formulate appropriate responses to address the patient concerns and questions in a positive manner.
- B6.4 Employ sensitivity and withhold bias when communicating with patients.
- B6.5 Report patient's progress and response to treatment goals.
- B6.6 Maintain written guidelines of the Health Insurance Portability and Accountability Act (HIPAA) in all communications.
- B 7.0 Apply observation techniques to detect changes in the health status of patients.**
- B 7.1 Demonstrate observation techniques.
- B 7.2 Differentiate between normal and abnormal patient health status.
- B 7.3 Document the patient findings and report information appropriately.
- B 7.4 Plan basic care procedures within the scope of practice to assist with patient comfort.
- B 8.0 Demonstrate the principles of body mechanics as they apply to the positioning, transferring, and transporting of patients.**
- B8.1 Explain the principles of body mechanics.
- B8.2 Determine appropriate equipment for transportation and transfer, including the modification of equipment and techniques to accommodate the health status of the patient.
- B 8.3 Demonstrate appropriate transport and transfer methods to accommodate the health status of the patient.
- B 8.4 Evaluate equipment for possible hazards.
- B 8.5 Integrate proper body mechanics, ergonomics, safety equipment, and techniques to prevent personal injury to patients and clients.
- B 9.0 Implement wellness strategies for the prevention of injury and disease.**
- B 9.1 Know and implement practices to prevent injury and protect health for self and others.
- B 9.2 Determine effective health and wellness routines for health care workers (i.e., stress management, hygiene, diet, rest, and drug use).
- B 9.3 Identify practices to prevent injuries and protect health, for self and others (i.e., seatbelts, helmets, and body mechanics).
- B 9.4 Know how to access available wellness services (i.e., screening, exams, and immunizations).
- B 9.5 Identify alternative/complementary health practices as used for injury and disease prevention.
- B 9.6 Explore consequences of not utilizing available wellness services and behaviors that prevent injury and illness.
- B 10.0 Comply with protocols and preventative health practices necessary to maintain a safe and healthy environment for patients, health care workers, co-workers, and self within the healthcare setting.**
- B 10.1 Describe the infection control cycle with consideration of the various types of microorganisms.
- B 10.2 Demonstrate use of facility policies and procedures of infection control while performing patient care.



- B 10.3 Evaluate potential causes and methods of transmitting infections and how to apply standard precautionary guidelines.
- B 10.4 Demonstrate the use of appropriate personal protective equipment (PPE).
- B 10.5 Practice proper hand hygiene.
- B 10.6 Use various manual and mechanical decontamination and sterilization techniques and procedures.
- B 10.7 Document and analyze sanitation and infection control procedures.
- B 11.0 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.**
- B 11.1 Describe basic emergency procedures used to respond to a hazardous spill.
- B 11.2 Explain how waste is handled, packaged, stored, and disposed of in accordance with federal, state, and local regulations including hazardous chemicals, biohazards, and radioactive materials.
- B 11.3 Adhere to the health care setting’s waste management program (e.g., recycling and reduction of regulated medical, solid, hazardous, chemical, and radioactive waste materials).
- B 11.4 Apply protective practices and procedure for airborne and bloodborne pathogens for equipment and facilities and identify unsafe conditions for corrective action.
- B 12.0 Adhere to the roles and responsibilities, within the scope of practice, that contribute to the design and implementation of treatment planning.**
- B 12.1 Understand scope of practice and related skills within prevention, diagnosis, pathology, and treatment occupations.
- B 12.2 Describe the various roles and responsibilities of health care workers as team members in an integrated healthcare delivery system
- B 12.3 Demonstrate the knowledge and delivery of specific skills and procedures as outlined within the scope of practice appropriate for patient care in prevention, diagnosis, pathology, and treatment.
- B 12.4 Follow appropriate guidelines for implementation of various procedures.
- B 13.0 Research factors that define cultural differences between and among different ethnic, racial, and cultural groups and special populations.**
- B 13.1 Utilize culturally appropriate community resources.
- B 13.2 Recognize complementary and alternative medicine as practiced within various cultures.
- B 13.3 Develop ethnographic skills, by location and information retrieval, carefully observe social behavior, and manage stress and time.
- B 13.4 Ask questions and explore aspects of global significance.
- B 13.5 Analyze data using relevant concepts.
- B 13.6 Know when and how to incorporate trained interpreters to facilitate communication and improve patient outcomes.

**Common Core State Standards**

**Language Standards-LS- (Standard Area, Grade Level, Standard #)**

- LS 11-12.1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
- LS 11-12.2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
- LS 11-12.6. Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing,

speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.

**Reading Standards for Informational Text – RSIT – (Standard Area, Grade Level, Standard #)**

RSIT 11-12.7. Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.

**Reading Standards for Literacy in Science and Technical Subjects – RRLST – (Standard Area, Grade Level, Standard #)**

RRLST 11-12.3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

RRLST 11-12.4. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 11-12 texts and topics*.

RRLST 11-12.7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

RRLST 11-12.9. Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

**Writing Standards – WS – (Standard Area, Grade Level, Standard #)**

WS 11-12.2. Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.

WS 11-12.4. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

WS 11-12.6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

WS 11-12.7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

**Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects – WHSST – (Standard Area, Grade Level, Standard #)**

WHSST 11-12.7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

WHSST 11-12.10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

**California History/Social Science Standards:**

AD 12.2 Students evaluate and take and defend positions on the scope and limits of rights and obligations as democratic citizens, the relationships among them, and how they are secured.

**Next Generation State Standards:**

**Scientific and Engineering Practices**

- SEP 1 Asking questions (for science) and defining problems (for engineering)
- SEP 2 Developing and using models
- SEP 3 Planning and carrying out investigations
- SEP 4 Analyzing and interpreting data
- SEP 5 Using mathematics and computational thinking
- SEP 6 Constructing explanations (for science) and designing solutions (for engineering)
- SEP 7 Engaging in argument from evidence
- SEP 8 Obtaining, evaluating, and communicating information

**Disciplinary Core Ideas**

- LS 1: From Molecules to Organisms: Structures and Processes
- LS 1.A: Structure and Function
- LS 1.B: Growth and Development of Organisms
- LS 2.D: Social Interactions and Group Behavior
- PS 1.B: Chemical Reactions

**Crosscutting Concepts**

- CC 1. Patterns
- CC 2. Cause and Effect: Mechanism and Explanation
- CC 4. Systems and System Models