

# 01. Introduction to Sports Medicine & Athletic Training

Content Area: **Science**  
Course(s):  
Time Period: **Marking Period**  
Length: **Three weeks**  
Status: **Published**

## **General Overview, Course Description or Course Philosophy**

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In this semester long course, students will gain insight into the field of sports medicine and athletic training as an up and coming profession. Students will explore how physical exercise can produce many favorable changes in some anatomical structures and enhance many physiological functions. Students enrolled in this course will receive an understanding of the multidisciplinary approach to patient assessment, treatment, and care. Students will obtain an overview of the basics of exercise physiology including prevention, management, treatment and rehabilitation of athletic injuries. This course is strongly recommended for students interested in pursuing careers in medicine, sports training, kinesiology, or other health related fields.

## **OBJECTIVES, ESSENTIAL QUESTIONS, ENDURING UNDERSTANDINGS**

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It is assumed that any student accepted into Sports Medicine and Athletic Training course has successfully completed Honors Biology or Biology CP. The NGSS is the foundation for the course. Therefore, this course of study will address and go beyond those knowledge and skill standards that reflect greater critical thinking.

Enable students to understand and relate concepts in the field of medicine to their own lives.

Foster a strong environment of teamwork and cooperation in finding answers to problems related to this course of study.

Continue to develop the understanding and appreciation of the limitations of the scientific analysis and research.

Enable the student to continue to develop writing skills that emphasize accuracy and clarity.

Enable the student to develop skills in decision-making based on an understanding of the basic principles of laboratory research.

Enable students to use their particular learning style to understand the principles of Sports Medicine.

Examination of how people of various cultures have contributed to the advancement of science and technology, and how major discoveries and events have advanced science and technology.

Examine communication lines between the athletic trainer, athletes, coaches and parents in dealing with athletic injuries.

Examine and relate concepts in the field of medicine to their own lives.

- Foster a strong environment of teamwork and cooperation in finding answers to problems related to this course of study.

## **CONTENT AREA STANDARDS**

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VHEL.9-12.9.4.12.H.(1).1	Explain planned procedures and goals to patients/clients and use a range of response strategies to address patient/client questions and concerns.
VHEL.9-12.9.4.12.H.(1).5	Demonstrate knowledge of the protocols for using patient/client health status information within scope of practice to document, evaluate, and adapt treatment plans.
VHEL.9-12.9.4.12.H.1	Demonstrate language arts knowledge and skills required to pursue the full range of postsecondary education and career opportunities.
VHEL.9-12.9.4.12.H.8	Evaluate and use information resources to accomplish specific occupational tasks.
VHEL.9-12.9.4.12.H.9	Use correct grammar, punctuation, and terminology to write and edit documents.

## **RELATED STANDARDS (Technology, 21st Century Life & Careers, ELA Companion Standards are Required)**

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CAEP.9.2.12.C.2	Modify Personalized Student Learning Plans to support declared career goals.
CAEP.9.2.12.C.5	Research career opportunities in the United States and abroad that require knowledge of world languages and diverse cultures.

## **STUDENT LEARNING TARGETS**

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1. Recall information on the various careers offered in the field of Sports Medicine.
2. Recognize an overview of the basics of exercise physiology including the prevention, management, treatment and rehabilitation of athletic injuries.
3. Recall basic anatomy, physiology and kinesiology concerning athletic injuries.
4. Expose students to the working environment and need for strong communication lines between the athletic trainer, athletes, coaches and parents in dealing with athletic injuries.
5. Execute research in the area of medical science.
6. Relate concepts in the field of medicine to their own lives.

## **Declarative Knowledge**

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Students will understand:

- 1. there are various careers offered in the field of Sports Medicine.
  2. the overview of the basics of exercise physiology including the prevention, management, treatment and rehabilitation of athletic injuries.
  3. the basic anatomy, physiology and kinesiology concerning athletic injuries.
  4. the working environment and need for strong communication lines between the athletic trainer, athletes, coaches and parents in dealing with athletic injuries
  5. Problem-solving, decision-making and inquiry skills, reflected by formulating usable questions and hypotheses, planning experiments, conducting systematic observations, interpreting and analyzing data, drawing conclusions, and communicating results.

## **Procedural Knowledge**

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Students will be able to:

- 1. Extend their research skills in the area of science.
  2. Relate concepts in the field of medicine to their own lives.
  3. Foster a strong environment of teamwork and cooperation in finding answers to problems related to this course of study.
  4. Continue to develop the understanding and appreciation of the limitations of the scientific analysis and research
  5. Develop enhanced writing skills that emphasize accuracy and clarity using APA format.

## **EVIDENCE OF LEARNING**

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### **Formative Assessments**

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- Help students track their individual progress toward the learning target (i.e. charts, graphs, data notebooks,

etc.)

- Ask students to explain their progress toward the learning target
- Ask students to provide evidence of their progress toward the learning target
- Facilitate individual conferences regarding use of data to track progress
- Use formative measures to chart individual and/or class progress towards learning targets using a performance scale
- Use formative assessment that reflects awareness of cultural differences represented in the classroom

### **Summative Assessments**

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- Benchmarks – departmental benchmark given at the end of MP1, MP2, or MP3 & MP4 (Semester Based Course)
- Alternative Assessments
  - Lab inquiries and investigations
  - Lab Practicals
  - Exploratory activities based on phenomenon
  - Gallery walks of student work
  - Creative Extension Projects
  - Build a model of a proposed solution
  - Let students design their own flashcards to test each other
  - Keynote presentations made by students on a topic
  - Portfolio

### **RESOURCES (Instructional, Supplemental, Intervention Materials)**

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France, Robert, C. Introduction to Sports Medicine and Athletic Training: Third Edition, Delmar Cengage Learning, Clifton Park, New York, 2011.

France, Robert, C. Workbook to Accompany: Introduction to Sports Medicine and Athletic Training: Second Edition, Delmar Cengage Learning, Clifton Park, New York, 2011.

TI-83+ graphing calculators, Vernier LabPro Technology, and Vernier Graphical Analysis software.

Journal of Sports Medicine App.

## INTERDISCIPLINARY CONNECTIONS

Technology/Multimedia	Video case studies
	Audio/visual media analysis
	Researching based writing
	Google
	Media Literacy
	Educational tech applications
English/Language Arts	Speech/debate
	Narrative Writing
	Information Writing
	Implementation of conventions of Standard English
	Language Aquisition
Math	Data collection/analysis
	Computations
	Statistics
	Financial/Economic/Business/Entrepenerial Literacy
Science & Health	Integrate quantitative or technical information expressed in words in a text. Distinguish among facts, reasoned judgment based on research findings, and speculation in a text.
	Compare and contrast the information gained from experiments, simulations,

	video, or multimedia sources with that gained from reading a text on the same topic.
	Experimentation
	Social Emotional Learning
	Geoscience
	Sustainability

## **ACCOMMODATIONS & MODIFICATIONS FOR SUBGROUPS**

See link to Accommodations & Modifications document in course folder.

### Differentiation/Accommodations/Modifications

Gifted and Talented	English Language Learners	Students with Disabilities	Students at Risk of School Failure
Extension Activities	Modifications for Classroom	(appropriate accommodations, instructional adaptations, and/or modifications as determined by the IEP or 504 teams)	Modifications for Classroom
<ul style="list-style-type: none"> <li>• Allow students to pursue independent projects based on their individual interests</li> <li>• Provide enrichment activities that include more advanced material</li> <li>• Allow team-teaching opportunities and collaboration</li> <li>• Set individual</li> </ul>	<ul style="list-style-type: none"> <li>• Pair visual prompts with verbal presentations</li> <li>• Repetition and practice</li> <li>• Model to be mastered</li> </ul>	<ul style="list-style-type: none"> <li>• Pair visual prompts with verbal presentations</li> <li>• Ask students to restate information, directions, and assignments.</li> <li>• Repetition and practice</li> <li>• Model skills/techniques to be</li> </ul>	<ul style="list-style-type: none"> <li>• Pair visual prompts with verbal presentations</li> <li>• Ask students to restate information, directions, and assignments.</li> <li>• Repetition and practice</li> <li>• Model to be mastered.</li> <li>• Extended time to complete classwork</li> <li>• Provide a copy of class notes</li> <li>• Preferential seating to be mutually determined by the student and teacher</li> <li>• A student may request to use a computer to complete assignments</li> <li>• Establish expectations for correct spelling on</li> </ul>
	Modifications for Homework/Assignments		
	<ul style="list-style-type: none"> <li>• Native Language Translation (peer, online assistive technology, translation device, bilingual dictionary)</li> <li>• Extended time for assignment completion as needed</li> </ul>		

<p>goals</p> <ul style="list-style-type: none"> <li>• Conduct research and provide a presentation of appropriate topics.</li> </ul>	<ul style="list-style-type: none"> <li>• Highlight key vocabulary</li> <li>• Use graphic organizers</li> </ul>	<p>mastered.</p> <ul style="list-style-type: none"> <li>• Extended time to complete classwork</li> </ul>	<p>assignment</p> <ul style="list-style-type: none"> <li>• Extra textbooks for home</li> </ul>
<ul style="list-style-type: none"> <li>• Design surveys to generate and analyze data to be used in a discussion.</li> <li>• Use of Higher Level Questioning Techniques</li> </ul>	<p>Beginners:</p> <ul style="list-style-type: none"> <li>• Use graphic models and visual examples to connect important ideas</li> <li>• Pair graphic representations with content vocabulary – math journals, vocabulary cards, and more</li> </ul>	<ul style="list-style-type: none"> <li>• Provide a copy of class notes</li> <li>• Preferential seating to be mutually determined by the student and teacher</li> <li>• A student may request to use a computer to complete assignments.</li> </ul>	<p>Build Students' Strengths and Multiple Intelligences</p> <ul style="list-style-type: none"> <li>• Verbal Linguistic</li> <li>• Logical – reasoning</li> <li>• Musical/ Rhythmic</li> <li>• Intrapersonal Intelligence</li> <li>• Visual Spatial Intelligence</li> <li>• Interpersonal Intelligence</li> </ul>
<ul style="list-style-type: none"> <li>• Provide assessments at a higher level of thinking</li> </ul>	<ul style="list-style-type: none"> <li>• Utilize manipulatives – pattern blocks, paper money, tangrams, etc. Use manipulatives to help students make connections between concrete and abstract concepts</li> <li>• Use pictures or visuals wherever possible</li> <li>• Cue students before asking a questions during class discussions</li> <li>• Help students with background vocabulary</li> <li>• Use graphic organizer</li> <li>• Modify the length of</li> </ul>	<ul style="list-style-type: none"> <li>• Establish expectations for correct spelling on assignments.</li> <li>• Extra textbooks for home. A student may request books on tape / CD / digital media, as available and appropriate.</li> <li>• Assign a peer helper in the class setting</li> <li>• Provide oral reminders and check student work during independent work time</li> <li>• Assist student with long and short term planning of</li> </ul>	<ul style="list-style-type: none"> <li>• Bodily Kinesthetic accommodations/modification sent may request books on tape / CD / digital media, as available and appropriate.</li> <li>• Assign a peer helper in the class setting</li> <li>• Provide oral reminders and check student work during independent work time</li> <li>• Assist student with long and short term planning of assignments</li> <li>• Encourage student to proofread assignments and tests</li> <li>• Provide regular parent/school communication</li> <li>• Teachers will check/sign student agenda daily</li> <li>• Student requires use of other assistive technology device</li> </ul>

<p>reading passages, with extended time to complete them</p>	<p>assignments</p>	<p>Modifications for Homework and Assignments</p>
<ul style="list-style-type: none"> <li>• Minimize homework to essential content and learning</li> <li>• Assign simplified homework with extended time to complete it</li> <li>• Simplify assessments: <ul style="list-style-type: none"> <li>○ true/false</li> <li>○ Multiple choice ( only two choices)</li> <li>○ Matching</li> <li>○ decreased number of questions</li> </ul> </li> <li>• Use of a bilingual dictionary</li> <li>• Focus on recognition work (listening, reading), rather than productive work (speaking and writing)</li> </ul>	<ul style="list-style-type: none"> <li>• Encourage student to proofread assignments and tests</li> <li>• Provide regular parent/ school communication</li> <li>• Teachers will check/sign student agenda daily</li> <li>• Student requires use of other assistive technology device</li> </ul>	<ul style="list-style-type: none"> <li>• Extended time to complete assignments Student requires more complex assignments to be broken up and explained in smaller units, with work to be submitted in phases</li> <li>• Provide the student with clearly stated (written) expectations and grading criteria for assignments</li> </ul>
<p>Intermediate:</p>	<p>Modifications for Homework and Assignments</p>	<p>Modifications for Assessments</p>
<ul style="list-style-type: none"> <li>• Use pictures or visuals wherever possible</li> <li>• Cue students before asking a questions during class discussions</li> <li>• Oral and written</li> </ul>	<ul style="list-style-type: none"> <li>• Extended time to complete assignments</li> <li>• Student requires more complex assignments to be broken up and explained in smaller units, with work to be submitted in phases</li> <li>• Provide the student with clearly stated (written) expectations and grading criteria for assignments</li> </ul>	<ul style="list-style-type: none"> <li>• Extended time on classroom tests and quizzes Student may take/complete tests in an alternate setting as needed</li> <li>• Restate, reread, and clarify directions/questions</li> <li>• Distribute study guide for classroom tests</li> <li>• Establish procedures for accommodations / modifications for assessments</li> </ul>



production expanded

- Focus on main/core vocabulary only
- Help students understand contextual terms

- Extended time for assessments

- Provide an outline of class notes so that students can focus on class discussion

- Ask students to rephrase key ideas in their own words

- Check comprehension of directions by asking students to restate the information

- Implement RAFT activities as they pertain to the types / modes of communication (role, audience, format, topic).

#### Modifications for Assessments

- Extended time on classroom tests and quizzes  
Student may take/complete tests in an alternate setting as needed

- Restate, reread, and clarify directions/questions

- Distribute study guide for classroom tests

- Establish procedures for accommodations / modifications for assessments