



2017-2018

# Sports Medicine and Therapy

OUTLINE

## DESCRIPTION:

Sports Medicine and Therapy is designed for students who are interested in the practical and theoretical aspects of sports injury prevention, recognition, treatment, and care of sports-related injuries. Students will learn basic anatomy and physiology of the human body, mechanisms of a sport injury, basic injury evaluation, sports therapy modalities including tapping, wrapping, protective bracing, equipment fitting, follow up care and use of equipment and techniques to aid patients in rehabilitation. Further academic skills are required to become a certified athletic trainer. Activities in this course include work-based learning that connects students to industry and the local community.

***Sports Medicine and Therapy has been UC a-g approved to meet the elective (“g” – Laboratory Science – Biology/Life Sciences) requirement.***

## INFORMATION:

- A. Pre-requisite: None
- B. Length: One year
- C. Sector: Health Science & Medical Technology
- D. Pathway: Patient Care

O*Net SOC Codes	
Code #	Title
31.2012.00	Occupational Therapy Aides
31.2022.00	Physical Therapist Aides

<b>Orientation</b>
<ul style="list-style-type: none"><li>A. Introduce the course and facilities.</li><li>B. Discuss the syllabus and major objectives.</li><li>C. Explain applicable classroom management procedures, the ROP Student Rules of Conduct, and any operational guidelines.</li><li>D. Review instructor/student expectations.</li><li>E. Explain enrollment and attendance requirements and procedures.</li><li>F. Review grading and student evaluation procedures.</li><li>G. Discuss the community classroom aspect of the program if applicable.</li><li>H. Discuss the “next steps” related to additional education, training, and employment.</li><li>I. Review classroom safety, emergency and disaster procedures.</li></ul>
<b>1. Communication Skills</b>
<ul style="list-style-type: none"><li>A. Demonstrate positive verbal communication skills using appropriate vocabulary, demeanor, and vocal tone in the classroom and/or worksite.</li><li>B. Read and interpret written information and directions.</li><li>C. Practice various forms of written communication appropriate to the occupation.</li><li>D. Practice positive body language skills.</li><li>E. Practice professional verbal skills for resolving a conflict.</li><li>F. Demonstrate active listening skills including techniques for checking for understanding, and for obtaining clarification of directions.</li></ul>
<b>2. Interpersonal Skills</b>
<ul style="list-style-type: none"><li>A. Demonstrate positive teamwork skills by contributing to a group effort.</li><li>B. Practice the importance of diversity awareness and sensitivity in the workplace.</li><li>C. Define sexual harassment in the workplace and identify the employee’s role and responsibility.</li><li>D. Practice participation skills.</li><li>E. Identify different personality types and strategies for working effectively with each type.</li><li>F. Practice business and social etiquette skills appropriate to the occupation.</li><li>G. Discuss the role of business and personal ethics in the decision-making process.</li><li>H. Evaluate various job-related scenarios and justify decisions based on ethics.</li><li>I. Demonstrate flexibility and adaptability in working with others.</li><li>J. Demonstrate the use of time management skills.</li></ul>
<b>3. Employability Skills</b>

- A. Demonstrate appropriate attendance and punctuality practices for the classroom and worksite, if applicable.
- B. Prepare a resume, cover letter, and job application forms.
- C. Demonstrate interviewing techniques using appropriate tone and body language.
- D. Demonstrate appropriate dress and grooming standards in seeking employment and for the workplace.
- E. Identify strategies for employment retention.
- F. Analyze the impact of social networking on employability.
- G. Identify the need for continuing education, professional development, and professional growth in chosen field.
- H. Identify appropriate procedures for leaving a job.
- I. Identify sources of job information, including electronic sources.
- J. Review company policies and current trends in employee compatibility screening, drug screening, and background checks.

#### 4. Leadership

- A. Define leadership and identify the responsibilities, competencies, and behaviors of successful leaders.
- B. Work with peers to promote divergent and creative perspectives.
- C. Demonstrate how to organize and structure work, individually and in teams, for effective performance and the attainment of goals.
- D. Explain multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.
- E. Employ ethical behaviors and actions that positively influence others.
- F. Use a variety of means to positively impact the direction and actions of a team or organization.
- G. Analyze the short-term and long-term effects a leader's actions and attitudes can have on productivity, morale, and organizational culture.

#### 5. Personal and Occupational Safety

- A. Demonstrate procedures to be followed in the case of emergencies.
- B. Discuss ways to report a potential safety hazard to a supervisor.
- C. Identify and discuss cyber ethics, cyber safety, and cyber security.
- D. Identify safety hazards commonly found in a setting where Sports Medicine is practiced.
- E. Take appropriate safety measures such as universal procedures.
- F. Apply personal safety practices to and from the job.
- G. Describe the procedure for reporting a work-related hazard or injury.
- H. Recognize the effects of substance abuse in the workplace.
- I. Define and discuss ergonomics/body mechanics in relationship to working conditions and patient care in the physical therapy environment.
- J. Explain importance of CAL-OSHA.
- K. Establish a plan for handling emergency situations in a Sports Medicine setting.
- L. Explain the importance of the American Physical Therapy Association (APTA) and the National Athletic Trainers Association (NATA).

## 6. Introduction to Sports Therapy

- A. Discuss the roles and responsibilities of a Sports Therapy Aide and/or Physical Therapy Aide.
- B. Explain the rules and regulation of operating a Sports Medicine Program.
- C. Identify the Sports Medicine Team and their responsibilities.
- D. Discuss the layout and organization of an Athletic Training Facility or Physical Therapy Clinic.
- E. Recognize the importance of proper record keeping and budgeting in the Sports Medicine setting.

## 7. Anatomy and Physiology of Sports Injuries

- A. Identify the physiological components and functions of the musculoskeletal system.
- B. Identify the physiological components and functions of the nervous system.
- C. Identify the physiological components and functions of the immune system.
- D. Identify the physiological components and functions of the digestive system.
- E. Identify the physiological components and functions of the endocrine system.
- F. Identify the physiological components and functions of the senses.
- G. Identify the physiological components and functions of the cardiovascular system.
- H. Identify the physiological components and functions of the respiratory system.
- I. Identify common sports disorders and injuries of each major body system.
- J. List the major body systems.
- K. Demonstrate the location of palpation points.

## 8. Injury Prevention through Fitness Training and Nutrition

- A. Identify the major conditioning seasons in relation to specific sports.
- B. Identify the principles of conditioning including flexibility, strength, and cardio-respiratory endurance in fitness training.
- C. Distinguish between body weight and body composition and how to measure for body mass index.
- D. Identify weight gain and weight loss principles in fitness training (including impact of salt on water absorption).
- E. Identify and discuss the pros and cons and legalities of nutritional supplements.
- F. Differentiate between the types of exercises necessary in each season and sport.
- G. Distinguish between the importance of the warm up period and cool down period in sports training.
- H. Identify the six classes of nutrients and discuss their major functions.
- I. Discuss the relationship between good nutrition, diet, and performance enhancement and injury prevention.
- J. Identify components of a nutritional label and how they contribute to general health.
- K. Analyze the main ingredients of a pre-game meal.
- L. Identify and discuss eating disorders.
- M. Identify the dangers of sports and performance enhancers.
- N. Identify components of a baseline concussion test to determine sports eligibility.

<b>9. Emergency Situations and Injury Recognition</b>
<ul style="list-style-type: none"><li>A. Demonstrate appropriate emergency response behaviors.</li><li>B. Explain the importance of CPR and the procedure for abdominal thrusts.</li><li>C. Identify measures needed to control bleeding and shock.</li><li>D. Demonstrate the correct procedure to safely transport an injured athlete.</li><li>E. Demonstrate the steps necessary for proper evaluation of an athletic injury.</li><li>F. Identify the signs and symptoms of common sports injuries.</li><li>G. Identify common blood borne pathogens and methods for prevention.</li><li>H. Identify components of an Emergency Action Plan.</li><li>I. Understand basic AED machine use and the situations requiring its use.</li></ul>
<b>10. Environmental Factors and Sports Therapy</b>
<ul style="list-style-type: none"><li>A. Identify the signs, symptoms, prevention, and treatment of injury or illness due to environmental conditions.</li><li>B. Discuss the dangers of over-exposure in the sun, dehydration, and precautions to take to protect against harm from the sun.</li><li>C. Describe the precautions to be taken by an athlete who is outside during an electrical storm.</li><li>D. Describe the effects of altitude, air quality, water pressure, and other environmental issues on physical performance.</li></ul>
<b>11. Protective Sports Equipment</b>
<ul style="list-style-type: none"><li>A. Identify appropriate attire and proper-fitting sports equipment.</li><li>B. Demonstrate proper removal of sports equipment in case of injury.</li><li>C. Identify various sports braces and purposes of each.</li><li>D. Discuss the legal ramifications related to the manufacture, purchase, and issue of protective equipment in sports.</li><li>E. Recognize the governing agencies that set the standards and rules for equipment safety.</li></ul>
<b>12. Sports Therapy Modalities</b>
<ul style="list-style-type: none"><li>A. Identify the various common modalities used in Sports Medicine and the purpose of each.</li><li>B. Discuss hydrotherapy, cold, heat, ultrasound, and electrotherapy therapies and their proper application in Sports Medicine.</li><li>C. Discuss contra-indications and precautions for common sports therapy modalities.</li><li>D. Demonstrate the various modalities associated with the plan of care for musculoskeletal injuries.</li><li>E. Recognize the association between Sports Medicine modalities and the relationship with therapeutic exercise.</li></ul>

<b>13. Ethics, Law, and Liability</b>
<ul style="list-style-type: none"><li>A. Explain the legal interaction between coaches, trainers, and players.</li><li>B. Define the legal concepts of liability, HIPAA, negligence, torts, and assumption of risks.</li><li>C. Discuss measures to minimize litigation in Sports Medicine and athletics.</li><li>D. Identify athletic equipment product liability.</li><li>E. Discuss insurance requirements that protect athlete, trainer, and healthcare provider.</li><li>F. Discuss the history and evolution of the Physical Therapy profession.</li><li>G. Identify members of the Physical Therapy staff in various settings.</li></ul>
<b>14. Observation, Reporting, and Charting</b>
<ul style="list-style-type: none"><li>A. Describe the legal importance of proper documentation and regulations.</li><li>B. Identify and describe formats used for documenting information in a medical record, including computer software, SOAP notes, and narrative charting.</li><li>C. Demonstrate appointment scheduling, filing, and record keeping using basic computer skills.</li><li>D. Identify and explain the patient's physical therapy plan of care.</li><li>E. Recognize physical variance as related to vital signs and articulate the condition of the patient to the supervisor.</li><li>F. List the various reports found in an athletic record.</li><li>G. Discuss the purpose of an athletic physical.</li><li>H. Complete an athletic injury report.</li></ul>
<b>15. Medical Terminology</b>
<ul style="list-style-type: none"><li>A. Correctly define, spell, and pronounce key terms associated with sports medicine cases, and use them in their proper context.</li><li>B. Identify basic rules for defining medical words.</li><li>C. Identify common abbreviations used in Sports Medicine settings.</li><li>D. Identify anatomical descriptors and fundamental human body structure.</li></ul>
<b>16. Bandaging and Taping Techniques</b>
<ul style="list-style-type: none"><li>A. Demonstrate the common techniques in the application of bandages and taping, including ankle wrap, ace wrap, and athletic tape.</li><li>B. Identify indications and contraindications.</li><li>C. Identify and explain the reasons for allergic reactions to tape and taping treatment and identify alternative ways of taping due to allergies.</li><li>D. Identify new taping methods and products (e.g., kinesio tape).</li></ul>

## 17. Vital Signs

- A. Identify the four vital signs, the body functions measured by each, and the normal measurements of each.
- B. Describe the equipment and methods used to obtain a patient's vital signs.
- C. Identify and locate major pulse points, including factors that affect pulse and respiratory rates in a physical therapy setting.
- D. Demonstrate the procedure for taking vital signs, including blood pressure, heart rate, and respiratory rate.

## Key Assignments

Assignment	Competencies	Career Ready Practices	Anchor Standards	Pathway Standards	CCSS
1. Students will participate in mock interviews that represent current industry practices (e.g., skills demonstrations, resumes, applications, portfolios, personal websites, etc.).	1A, B, D 3B, C, D, I, J	2 3 10	2 3		LS 11-12.6 SLS 11-12.2
2. Students will demonstrate knowledge of human anatomy and physiology via a practical lab exam using components of a disarticulated skeleton, anatomical models and/or diagrams.	7A, C, D 15A, B, D	1 5	5 10	B5.0	LS 11-12.1, 11-12.2, 11-12.6 RSIT 11-12.8 RLST 11-12.4
3. Students will design an injury rehabilitation regimen incorporating equipment (including modalities) and exercises tailored to specific body parts.	8B, F, G 12A-E 13D 14D	1 2 5	5 10	B8.0 B12.0	LS 11-12.1, 11-12.2, 11-12.5, 11-12.6 WS 11-12.4, 11-12.6, 11-12.8
4. Students will complete a food journal for one week and analyze the nutritional content using online nutritional analysis calculations. Students will write a reflective essay on the findings, suggestions on how to improve their nutrition, and their personal nutritional goals for the year.	8H-L	2 4 6	4 5	B3.0	A-REI 1, 3, 10 S-IC 1
5. Student will demonstrate emergency protocols, including the proper use of a spine board, proper technique of performing the log roll, forms of CPR and the Heimlich Maneuver.	9A-G 17B, D 5A	1 2 5 9	2 5 6	B8.0	LS 11-12.1, 11-12.5, 11-12.6
6. Students will demonstrate the purpose and use of various types of equipment used to prevent injury. Students will demonstrate methods used to properly fit and use protective equipment, including: <ul style="list-style-type: none"> <li>a. Fitting ankle, knee, shoulder and wrist braces.</li> <li>b. Checking fittings for protection and safety.</li> </ul>	11A-E 13D	1 8	6 8	B9.0	RSIT 11-12.4 S-IC 1, 2, 3, 5, 6

Assignment	Competencies	Career Ready Practices	Anchor Standards	Pathway Standards	CCSS
<ul style="list-style-type: none"> <li>c. Properly fitting a football helmet, making sure all helmet pads are secure and checking the outer shell for cracks.</li> <li>d. Properly fitting shoulder pads, making sure to cover all necessary areas to prevent injuries.</li> </ul>					
<p>7. Given a scenario of an injury, students will demonstrate proper charting techniques, including history taking, observation, palpation and stress testing involved in the examination of the injury. Students must identify specific ranges of motion for various joints, measure the motions using a goniometer, determine which muscles produce the motions and correctly perform a manual muscle test. All findings are then documented on an injury report.</p>	<p>13B 14A-F, H 15C</p>	<p>1 2 5</p>	<p>2 5 8 10</p>	<p>B4.0 B5.0 B7.0</p>	<p>LS 11-12.1, 11-12.2, 11-12.3, 11-12.6 RSIT 11-12.8 RLST 11-12.1, 11-12.4 WS 11-12.4 WHSST 11-12.2, 11-12.4</p>
<p>8. Students will demonstrate proper taping techniques to increase stability and proprioception and decrease pain for various joint injuries.</p>	<p>16A-D</p>	<p>1 5 9</p>	<p>5 9 10</p>	<p>B9.0</p>	<p>RLST 11-12.9 PS 2.A</p>
<p>9. Students will measure blood pressure and heart rate by taking and recording a radial pulse on a partner. Students will take and record the blood pressure of a partner.</p>	<p>17A-D</p>	<p>1 5 6 9</p>	<p>9 10</p>	<p>B11.0</p>	<p>RLST 11-12.3</p>

## Standards Assessed in this Program

### Career Ready Practices

1. Apply appropriate technical skills and academic knowledge.
2. Communicate clearly, effectively, and with reason.
3. Develop an education and career plan aligned to personal goals.
4. Apply technology to enhance productivity.
5. Utilize critical thinking to make sense of problems and persevere in solving them.
6. Practice personal health and understand financial well-being.
7. Act as a responsible citizen in the workplace and the community.
8. Model integrity, ethical leadership, and effective management.
9. Work productively in teams while integrating cultural/global competence.
10. Demonstrate creativity and innovation.
11. Employ valid and reliable research strategies.
12. Understand the environmental, social, and economic impacts of decisions.

### Anchor Standards

#### 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.

## Pathway Standards

### Health Science and Medical Technology - Patient Care Pathway

**B3.0** Know how to apply mathematical computations used in healthcare delivery system.

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

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

**B7.0** Apply observation techniques to detect changes in the health status of patients.

**B8.0** Demonstrate the principles of body mechanics as they apply to the positioning, transferring, and transporting of patients.

**B9.0** Implement wellness strategies for the prevention of injury and disease

**B11.0** 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.

**B12.0** Adhere to the roles and responsibilities, within the scope of practice, that contribute to the design and implementation of treatment planning

## Common Core State Standards

### ENGLISH LANGUAGE ARTS

#### Language Standards

**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 (career and college) readiness level, demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.

**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 11-12.3:** Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.

**LS 11-12.5:** Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

**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 Information Text**

**RSIT 11-12.8:** Delineate and evaluate the reasoning in seminal US texts, including the application of constitutional principles and use of legal reasoning (e.g., in US Supreme Court majority opinions and dissents) and the premises, purposes, and arguments in works of public advocacy (e.g., *The Federalist*, presidential addresses).

## **Reading Standards for Literacy in Science and Technical Subjects**

**RLST 11-12.1:** Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes to any gaps or inconsistencies in the account.

**RLST 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.

**RLST 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.

**RLST 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.

## **Speaking and Listening Standards**

**SLS 11-12.2:** Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions, and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data.

**SLS 11-12.1:** Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

**SLS 11-12.1d:** Respond thoughtfully to diverse perspectives, synthesize comments, claims and evidence made on all sides of an issue, resolve contradictions when possible, and determine what additional information or research is required to deepen the investigation or complete the work.

## **Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects**

**WHSST 11-12.2:** Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.

**WHSST 11-12.4:** Produce clear and coherent writing in which the development, organization, and style are appropriate for task, purpose, and audience.

## **Writing Standards**

**WS 11-12.4:** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

**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 and 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.

**WS 11-12.8:** Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths

and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation including footnotes and endnotes.

## **MATHEMATICS**

### **Algebra-Reasoning with Equations and Inequalities**

**AREI 1:** Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.

**AREI 3:** Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.

### **Algebra - Reasoning with Equations and Inequalities**

**A-REI 10:** Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).

### **Statistics and Probability - Making Inferences and Justify Conclusions**

**S-IC 1:** Understand statistics as a process for making inferences about population parameters based on a random sample from that population.

**S-IC 2:** Decide if a specified model is consistent with results from a given data-generating process, e.g., using simulation. For example, a model says a spinning coin falls heads up with probability 0.5. Would a result of 5 tails in a row cause you to question the model?

**S-IC 3:** Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.

**S-IC 5:** Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant.

**S-IC 6:** Evaluate reports based on data.

## **SCIENCE**

### **Physical Sciences**

**PS 2.A:** Forces and Motion

## A-G Approved Key Assignments

1. Students will discuss the various employee roles in a physical therapy and sports medicine setting.
2. They will research and present on various medical careers related to sports medicine and therapy. They will also identify schools and programs that offer sports medicine and physical therapy.
3. Students will develop and present a College and Career Professional Portfolio that includes the following: Cover letter, resume, samples of work that demonstrate mastery of standards, treatment plans, etc.
4. Students will pick 2 medical field careers and then have them find suitable colleges that offer their specific degree.
5. Students describe and locate anatomical structures on models/charts, handouts.
6. Student will research conditions/diseases and present their findings. Presentations must include relevant anatomy, mechanism of injury, signs and symptoms, and treatment.
7. Research paper on selected cardiovascular diseases. Include: Description of Disease, Causes of Disease, Symptoms that are present in the disease, treatment for the disease.
8. Demonstrate common Kinesthetic Movements to identify the parts of the brain that are being used.
9. Review video on disarticulation and complete a practical exam identifying the major bones and muscles.
10. Students will practice on each other using neurological tools to understand how sensations work in relation to the spinal nerves.
11. LAB-Students will complete a fitness assessment and flexibility test.

12. Students design a complete upper and lower body exercise program, detailing individual weight exercises for each body part.
13. Students are quizzed on the various types of machines and their uses.
14. Students then design 3 different weight programs for different sports teams.
15. Students will design an athletic training facility designed to meet the needs of high school athletes. Students will determine equipment needed and explain the purpose and use of the equipment.
16. Students also develop detailed explanations of the exercise physiology involved in the use of at least ten different gym apparatus or equipment.
17. Students will develop a student trainer contract, additional forms a trainer would use for their clients, and a budget for necessary supplies.
18. Complete a food journal for 1 week and analyze the nutritional content using internet nutritional analysis calculators. Students write a reflective essay on the findings, suggestions on how to improve their nutrition, and their personal nutrition goals for the year.
19. Students review and discuss eating disorders. Students create healthy eating pamphlets that include balanced meals, examples of what to eat for certain meals and what to eat to maintain a healthy lifestyle.
20. Students also research and create a presentation on popular diets discussing the pros and cons. Working in teams, students create and present a Teen Health campaign for their campus.
21. Students will participate in role playing activities that demonstrate the proper use of a spine board, and the proper technique of performing the log roll.
22. Students will list common injuries and identify common modalities used to treat the injury and body part. Students will demonstrate the

various modalities and discuss the physiological response of the body.
23. Students will participate in a field trip to a training room and review methods used to prevent and treat sports injuries.
24. Students will discuss the purpose and use of various types of equipment used to prevent injury. Students will demonstrate methods used to properly fit and use protective equipment, including: <ul style="list-style-type: none"><li>○ Fitting ankle, knee, shoulder, and wrist braces.</li><li>○ Checking fittings for protection and safety.</li><li>○ Properly fitting a football helmet, making sure all helmet pads are secure, and checking the outer shell for cracks.</li><li>○ Properly fitting shoulder pads, making sure to cover all necessary shoulder areas to prevent injuries.</li></ul>
25. Students will research and write a 3-5 page report explaining and illustrating the use of protective gear in a particular sport.
26. Develop a rehabilitation plan for out-patient injuries.
27. Given a scenario of an injury, students demonstrate the history taking, observation, palpation and stress testing involved in the evaluation of the injury. Students must identify specific ranges of motion for various joints, measure the motions using a goniometer, determine which muscles produce the motions and correctly perform a manual muscle test. All findings are then documented on an injury report.
28. Students will discuss what SOAP notes are, and how they simplify charting. They will discuss the legalities of a chart, and the importance of the privacy of its contents.
29. LAB-Demonstrate proper taping techniques to increase stability and proprioception, and decrease pain.
30. LAB - Measure blood pressure and heart rate. -Taking and record of radial pulse on partner, -Take and record blood pressure of partner.