



# GEORGIA

PEACH STATE PATHWAYS

Career, Technical, & Agricultural Education

## HEALTHCARE SCIENCE

**COURSE:** 25.525 General Medicine

**UNIT:** 9.3 Medical-Surgical Services-Musculoskeletal Care

**SUB UNIT:** Nervous System



## INTRODUCTION

### Annotation:

In this subunit students will demonstrate understanding of and perform advanced technical skills in nervous system care, especially those that affect normal functioning of the musculoskeletal system, Physical Therapy and Orthopedics. The Unit will include research into diseases, disorders, or trauma to the nervous system that might cause a need for the services provided in the Physical Therapy and Orthopedic pathways. The students will perform a reflex assessment lab and do a research assignment.

### Grade(s):

<input type="checkbox"/>	9 <sup>th</sup>
<input type="checkbox"/>	10 <sup>th</sup>
<input checked="" type="checkbox"/>	11 <sup>th</sup>
<input checked="" type="checkbox"/>	12 <sup>th</sup>

**Time:** Two 50 minute class periods

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**Additional Author(s):** Jeffrey L. Engel, Science

### Students with Disabilities:

For students with disabilities, the instructor should refer to the student's IEP to be sure that the accommodations specified are being provided. Instructors should also familiarize themselves with the provisions of Behavior Intervention Plans that may be part of a student's IEP. Frequent consultation with a student's special education instructor will be beneficial in providing appropriate differentiation.



# FOCUS STANDARDS

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## **GPS Focus Standards:**

**HS-TGM-8. Students will understand and utilize terminology related to the human anatomy.**

- f. Utilize diagnostic, surgical, and procedural terms and abbreviations related to the nervous system.

**HS-TGM-5. Students will understand the importance of and demonstrate data collection as it relates to the goals, objectives, and implementation of the treatment plan according to their scope of practice.**

- a. Observe, record, and report client behavior.
- b. Assist treatment team in observing, reporting, and recording client healthcare needs, strengths, and problems.
- c. Follow policies and protocols of the facility.
- d. Understand and demonstrate all necessary interventions of the patient treatment plan as it relates to their scope of practice.
- e. Examine and demonstrate the importance of client collaboration and acceptance in identifying and implementing appropriate interventions in the treatment plan.
- f. Assist in identifying potential educational needs.

## **GPS Academic Standards:**

**ELA9RL.** The student understands and acquires new vocabulary and uses it correctly in reading and writing.

**SAP3.** Students will assess the integration and coordination of body functions and their dependence on the endocrine and nervous systems to regulate physiological activities.

- a. Interpret interactions among hormones, senses, and nerves which make possible the coordination of functions of the body.

## **National / Local Standards / Industry / ISTE:**



## UNDERSTANDINGS & GOALS

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### **Enduring Understandings:**

The students will understand how to utilize diagnostic, surgical, and procedural terms and abbreviations related to the nervous system. Students will understand how to provide care for patients with nervous system disorders, especially disorders that affect the functioning of the musculoskeletal system. They will further understand how to assist the treatment team in observing, reporting, and recording client healthcare needs, strengths, and problems.

### **Essential Questions:**

- How do I provide care for clients with nervous disorders, especially those that affect normal functioning of the musculoskeletal system?
- How do I manage various devices used in caring for clients with nervous disorders that affect normal functioning of the musculoskeletal system?

### **Knowledge from this Unit:** The student will have knowledge of:

- Recall Anatomy and physiology of the nervous system.
- Diseases, disorders, and injuries affecting the nervous system.
- How to use tools in assessment of the nervous system.

### **Skills from this Unit:** The student will be able to:

- Research and report diseases, disorders, or trauma to the nervous system.
- Demonstrate techniques for assessing reflexes.
- Assist treatment team in observing, reporting, and recording client healthcare needs, strengths, and problems following policies and protocols of the facility.



## ASSESSMENT(S)

**Assessment Method Type:** Select one or more of the following. Please consider the type(s) of differentiated instruction you will be using in the classroom.

- ☐ Pre-test
- ☐ Objective assessment - multiple-choice, true- false, etc.
  - ☐ Quizzes/Tests
  - ☐ Unit test
- ☐ Group project
- ☒ Individual project
- ☒ Self-assessment - May include practice quizzes, games, simulations, checklists, etc.
  - ☒ Self-check rubrics
  - ☒ Self-check during writing/planning process
  - ☐ Journal reflections on concepts, personal experiences and impact on one's life
  - ☐ Reflect on evaluations of work from teachers, business partners, and competition judges
  - ☐ Academic prompts
  - ☐ Practice quizzes/tests
- ☐ Subjective assessment/Informal observations
  - ☐ Essay tests
  - ☐ Observe students working with partners
  - ☐ Observe students role playing
- ☐ Peer-assessment
  - ☐ Peer editing & commentary of products/projects/presentations using rubrics
  - ☐ Peer editing and/or critiquing
- ☐ Dialogue and Discussion
  - ☐ Student/teacher conferences
  - ☐ Partner and small group discussions
  - ☐ Whole group discussions
  - ☐ Interaction with/feedback from community members/speakers and business partners
- ☐ Constructed Responses
  - ☐ Chart good reading/writing/listening/speaking habits
  - ☒ Application of skills to real-life situations/scenarios
- ☐ Post-test

**Assessment(s) Title:**

Lab: Reflex Assessment

Oral Report on Research and report on diseases, disorders, or trauma to the nervous system

**Assessment(s) Description/Directions:**

- Lab: Reflex Assessment can be assigned with a demonstration lab or power point, make copies of the lab for each student.
- Oral Report Assignment Rubric (copy 1 for each student) Assign and give time to work in class.

**Attachments for Assessment(s):** Please list.

- Lab: Reflex Assessment
- Oral Report Rubric



# LEARNING EXPERIENCES

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**Instructional planning:** Include lessons, activities and other learning experiences in this section with a brief description of the activities to ensure student acquisition of the knowledge and skills addressed in the standards. Complete the sequence of instruction for each lesson/task in the unit.

## Sequence of Instruction

### 1. Identify the Standards. Standards should be posted in the classroom for each lesson.

HS-TGM-8. Students will understand and utilize terminology related to the human anatomy.

HS-TGM-5. Students will understand the importance of and demonstrate data collection as it relates to the goals, objectives, and implementation of the treatment plan according to their scope of practice.

ELA9RL. The student understands and acquires new vocabulary and uses it correctly in reading and writing.

SAP3. Students will assess the integration and coordination of body functions and their dependence on the endocrine and nervous systems to regulate physiological activities.

### 2. Review Essential Questions.

- How do I provide care for clients with nervous disorders, especially those that affect normal functioning of the musculoskeletal system?
- How do I manage various devices used in caring for clients with nervous disorders that affect normal functioning of the musculoskeletal system?

### 3. Identify and review the unit vocabulary. Nervous system

### 4. Assessment Activity. Review A&P of nervous system (prepare and overhead or power point presentation)

5. Lecture on How to assess Reflexes.

6. Assign Lab: Reflex Assessment

7. Assign research on Disease report of Nervous system using Oral report rubric and give time for research, may be assigned as homework.

8. Set time to present Oral Report on Disease of Nervous system

### Attachments for Learning Experiences: Please list.

- Lab : Reflex Assessment
- Overhead for Reflex Assessment
- Rubric: Oral Presentation of Research Report
- List of vocabulary words for Nervous System

**Notes & Reflections:**

Teacher may prepare a test to cover vocabulary and terms from Anatomy and Physiology.



## CULMINATING PERFORMANCE TASK (Optional)

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**Culminating Unit Performance Task Title:**

- Lab: Reflex Assessment
- Oral Report Rubric for Research of a Nervous System Disease, Disorder, or Trauma

**Culminating Unit Performance Task Description/Directions/Differentiated Instruction:**

The report on the Nervous System Disorder, or Trauma can be presented in a number of ways and the students can be allowed choices of how to present the information.

**Attachments for Culminating Performance Task:** Please list.

- Lab: Reflex Assessment
- Oral Report Rubric on Research Nervous System Disease, Disorder, or Trauma Rubric



## UNIT RESOURCES

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**Web Resources:**

**Attachment(s):** Supplemental files not listed in assessment, learning experiences, and performance task.

**Materials & Equipment:**

- A copy of the labs and report rubric for each student
- Reflex Assessment lab: reflex hammer, paperclip, examples for odor check (coffee, vanilla, mouthwash, lemon slices, perfume, pine scent, cinnamon, ect.)

**What 21st Century Technology was used in this unit:**

<input checked="" type="checkbox"/>	Slide Show Software
<input checked="" type="checkbox"/>	Interactive Whiteboard
<input type="checkbox"/>	Student Response System
<input type="checkbox"/>	Web Design Software
<input type="checkbox"/>	Animation Software
<input type="checkbox"/>	Email

<input type="checkbox"/>	Graphing Software
<input type="checkbox"/>	Calculator
<input checked="" type="checkbox"/>	Desktop Publishing
<input type="checkbox"/>	Blog
<input type="checkbox"/>	Wiki
<input type="checkbox"/>	Website

<input type="checkbox"/>	Audio File(s)
<input type="checkbox"/>	Graphic Organizer
<input checked="" type="checkbox"/>	Image File(s)
<input type="checkbox"/>	Video
<input type="checkbox"/>	Electronic Game or Puzzle Maker