

**ODESSA COLLEGE**  
**Physical Therapist Assistant Program**  
**Spring 2011**

**COURSE SYLLABUS**

**Course Number:** PTHA 2431  
**Course Title:** **Management of Neurological Disorders**  
**Credit Hours:** 4 (3 lecture/1 lab)  
**Contact Hours:** 48 lecture/48 lab  
**Prerequisites:** PTHA 1413, 2409, 2201, 2435  
**Corequisites:** PTHA 2461, 2462  
**Instructors:** Tom McKelvey  
**Phone:** Office – 335-6830 Cell – 528-6393  
**Email:** [tmckelvey@odessa.edu](mailto:tmckelvey@odessa.edu)  
**Office Hours:** as announced in class and by appointment

**Course Description:**

Advanced course integrating previously learned and new skills/techniques into the comprehensive rehabilitation of selected neurological disorders. Time management, creative thinking, decision-making, problem-solving and reasoning abilities as they relate to progressing the plan of care are emphasized. Sections of study will include selected progressive disabilities, traumatic brain injury, cerebral vascular accident, spinal cord injury and pediatric neurological conditions. This course is completed during the first part of the semester to allow for the final full-time clinical experiences. (SCANS 1, 2, 5, 6, 9, 11)

**Required Textbooks:**

1. Neurologic Intervention for Physical Therapy – Second Edition; by Martin & Kessler; Saunders, 2007
2. PTHA 2431 Course Packet for Spring 2011

**Objectives:**

After completing this course, the student should be able to:

- 1.0 Describe characteristics and clinical manifestations of common neurological conditions.
- 2.0 Understand the role of physical therapy in the rehabilitation of selected neurological conditions.

**Competencies:**

- 1.0 To demonstrate competency in describing characteristics and clinical manifestations of common neurological conditions, the student should be able to:
  - 1.1. \*Identify and describe etiologic factors and clinical manifestations of selected neurological conditions.
  - 1.2. \*Describe levels of arousal, mentation and cognition using selected scales.
  - 1.3. \*Describe selected abnormal patterns of muscle tone.
- 2.0 To demonstrate competency in understanding the role of physical therapy in the rehabilitation of selected neurological conditions within the plan of care established by the physical therapist, the student should be able to:
  - 2.1. \*Identify treatment precautions for selected neurological conditions.
  - 2.2. \*Identify and describe important components of a physical therapy program for selected neurological conditions.
  - 2.3. \*Perform and/or describe typical physical therapy interventions for patients with selected neurological conditions, including bed mobility training, mat activities, developmental activities, facilitation, inhibition, activities of daily living training, use of assistive/adaptive devices, gait training and wheelchair management skills.
  - 2.4. \*Describe patient responses that necessitate immediate action or adjustments within the plan of care and communication with the supervising physical therapist.

*\* Indicates integrated, core curriculum skills (math, reading, writing, communication, technological literacy and/or critical thinking)*

**Methods of Presentation:**

Lectures, demonstrations, laboratory practice, reading assignments, and outside projects and/or assignments.

**Course Requirements:**

In order to receive credit for this course, all students must:

1. Complete all unit tests.
2. Complete all laboratory sessions and worksheets.
3. Complete all assigned projects and class presentations.
3. Complete the final exam.

<b>Grade Compilation:</b>	Labs	(see below)
	Quizzes and Tests	70%
	Final Exam	30%

Active participation in every lab session is expected throughout the course. Active participation includes being present in the lab and interacting appropriately with faculty and other students to learn and practice clinical skills for the entire duration of each lab session. Students who do not actively participate in **all** lab sessions will have 5 percentage points deducted from their overall course grade at the end of the semester. This means that a student with a combined test/final exam score of less than 75% would fail the course if they did not actively participate in **all** lab sessions

<b>Grading Scale:</b>	90-100 = A
	80-89 = B
	70-79 = C
	60-69 = D
	Below 60 = F

*Note: Students must make a minimum grade of C in each PTA course in order to remain in the program.*

**Procedure for Requesting Special Accommodations**

Odessa College complies with Section 504 of the Vocational Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. If the student has any special needs or issues pertaining to access to and participation in any class at Odessa College, please contact Becky Rivera-Weiss in the Office of Disability Services at 432-335-6861 to request assistance and accommodations.

Physical therapist assistant students with a disability who request reasonable accommodations should meet with the Program Director no later than the first week of classes. Reasonable accommodations will be provided as authorized by the Office of Disability Services as long as the ability to meet course requirements is not compromised. Physical Therapist Assistant faculty provide no accommodations without authorization. It is the student's responsibility to be a self-advocate when requesting accommodations. The student will need to meet with each course instructor at the beginning of class to discuss the particular accommodation needed. Documentation of special needs will be maintained in the student's file.

**Professional Behavior:**

Professional behavior is absolutely essential both while the individual is a student in this program as well as after graduation. The Professional Behaviors Assessment form provides a standard for behavior and a mechanism for self-assessment by the student as well as assessment by faculty during the academic component of the program. If a faculty member observes consistent failure to demonstrate acceptable professional behavior by a student, the faculty member will utilize the assessment form as a tool for counseling the student. **Failure to respond appropriately to counseling regarding professional behaviors will result in dismissal from the program.**

**Attendance:**

Regular attendance at lecture and lab is essential and has a direct effect on the final grade that a student earns in class. Non-attendance on the part of a student may result in grade penalty or may lead to dismissal from the program.

A student should attend all lecture and laboratory sessions. Habitual or patterned absenteeism in lecture or lab will not be tolerated. As soon as such a problem is identified, the student will be required to meet with the faculty to determine a course of action and, if the problem is not corrected, the student will be subject to dismissal from the program. Absences in laboratory sessions are particularly problematic because of the lost opportunity to practice skills; therefore, students will be penalized for missing more than one lab session per semester. Should a student miss more than one lab session, one point for each missed session will be deducted from the final course grade.

All absences must be reported to the appropriate faculty member prior to the start of class. If the faculty member cannot be reached directly, a voice mail message may be left. Failure to notify the faculty prior to an absence will affect the student's Professional Behaviors Assessment.

**Acceptance of Late Assignments:**

Projects or outside assignments are due at the beginning of class on the assigned due date. Late papers will receive a 5% per day grade penalty (including Saturday and Sunday). This penalty will continue to be assessed each day the assignment is not turned in.

**Missing an Exam:**

Exams are defined as formally scheduled examinations covering a major portion of the course content and cumulatively comprising a relatively large percentage of the overall grade for a course. Every effort should be made by the student to be present for all exams. If it is necessary for a student to miss an exam, the instructor must be notified prior to the scheduled exam time and arrangements must be made for make-up. It is the instructor's option to give the same exam as the one missed or a different exam over the same content. If the exam is not made up within one class day, a 5% per day penalty (including Saturday and Sunday) will be assessed each day the exam is not taken.

**Projects:**

Detailed instructions will be given during the course at the appropriate time.

**Course Outline:**

- I. INTRO TO NEUROLOGIC INTERVENTIONS
  - A. Treatment Approach Used With Neuro Patients
  - B. Brain Functions
- II. CVA
  - A. Introduction to Cerebrovascular Accidents
  - B. Common Stroke Syndromes
  - C. Visual Impairments
  - D. Sensory Impairments
  - E. Perceptual Impairments
  - F. Communication Impairments
  - G. Orofacial Deficits
  - H. Respiratory Impairments
  - I. Shoulder Dysfunction
  - J. Motor Impairments
  - K. Specific Treatment Approaches
  - L. Medications
  - M. General Treatment Guidelines
  - N. Positioning
  - O. ROM Exercises
  - P. Functional Training

- Q. Mat Program
- III. TRAMATIC BRAIN INJURY
  - A. Introduction
  - B. Incidence
  - C. Pathophysiology
  - D. Signs and Symptoms
  - E. Specific Deficits Post Head Injury
  - F. Prognostic Indicators and Outcome Predictors
  - G. Treatment for patients at Rancho Levels I - VIII
  - H. Medications commonly used with TBI
  - I. Hints to Enhance Recovery From TBI
- IV. SPINAL CORD INJURY
  - A. Introduction
  - B. Etiology
  - C. Classification of SCI
  - D. Mechanisms of Injury
  - E. Brown-Séquard (sa kar') Syndrome
  - F. Anterior Cord Syndrome
  - G. Central Cord Syndrome
  - H. Posterior Cord (Dorsal Column) Syndrome
  - I. Sacral Sparing
  - J. Cauda Equina Injuries
  - K. Root Escape
  - L. Clinical Picture Following SCI
  - M. Complications
  - N. Acute Management - Fracture stabilization
  - O. P.T. Assessment
  - P. Treatment
- V. PEDIATRICS
  - A. Developmental Process
  - B. Cerebral Palsy
  - C. Treatment of Cerebral Palsy
  - D. Myelomeningocele
  - E. Treatment of Myelomeningocele
- VI. MULTIPLE SCLEROSIS
  - A. Introduction
  - B. Clinical Signs / Symptoms and Treatment
  - C. Pt / Family Education
- VII. PARKINSON'S DISEASE
  - A. Introduction
  - B. Clinical Signs
  - C. Drug Management
  - D. Surgical Management
  - E. Physical Therapy Intervention
- VIII. GUILLAIN-BARRÉ SYNDROME
  - A. Introduction
  - B. Clinical Signs / Symptoms
  - C. Physical Therapy Intervention
- IX. POSTPOLIO SYNDROME
  - A. Introduction
  - B. Clinical Signs / Symptoms
  - C. Physical Therapy Interventio