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### PT 567.01: Principles of Adult Neurological Rehabilitation

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**PT-567 (Fall)**  
**PRINCIPLES OF ADULT NEUROLOGICAL**  
**REHABILITATION**

Instructor: Chuck Leonard PT, PhD

**PT-567/568**

**PRINCIPLES OF ADULT NEUROLOGICAL REHABILITATION**

I. PT- Principles of Adult Neurological Rehabilitation

II. Credit: 5 Credits

III. Instructor: Chuck Leonard, Ph.D., PT

IV. Clock Hours: 5-6 hours per week for 5 weeks

Class meets M:8-10,1-2

W:10-12; F: 10-12

V. Course Description: Various medical and societal aspects of adult-onset stroke are presented in addition to physical therapy and medical rehabilitation procedures. Pathophysiology, prognosis, spasticity (mechanisms and treatment), gait assessment, motor control issues, functional outcome measures, and various treatment approaches are discussed.

VI. Required Reading:

Faculty Packet

Introduction to the Neurological Examination by M. Nolan

The Neuroscience of Human Movement by CT Leonard

VII. Schedule and Course Content (subject to change)

**Week 1**

Impact of Stroke on the Health Care System

Stroke Risk Factors

Pathophysiology of CVA

Neuroscientific Principles Related to CVA

Principles of Neurological Examination

Definitional Terms

Spasticity

Processes of Recovery

Pediatric vs. Adult

Principles of the Neurological Examination

Chart Documentation

## **Week 2**

Gait Analysis of the Hemiplegic Patient

Shoulder/Hand Syndrome Following CVA  
Reflex Sympathetic Dystrophy

Prognosis

Time course of recovery from acute to chronic stages.  
Treatment implications.

**Patient Presentation #1** (Students are expected to dress in a professional manner for these presentations)

## **Week 3**

Measurement of Functional Outcomes

LAB- (Spasticity Reduction, Balance, Coordination, Transfers, Trunk, UE, LE.

**Patient Presentation #2**

## **Week 4**

Motor Control/Learning Theory and Techniques

Constraint Induced Therapies  
Treadmill Training  
Computer/Robot Assisted Therapies

**Patient Presentation #3**

## **Week 5**

Guide to PT Practice (Adult CVA)

Miscellaneous Interventions

Biofeedback; Inhibitive Casting; Medications to decrease spasticity; PNF; Dorsal Root Rhizotomies; Weird Science/Continuing Educ. in Neuro Rehab.

Hospital Neurological Ward Rounds or  
Patient Presentation or  
Physician (Neurologist or Physiatrist) Lecture

**Final Examination**

VIII. Objectives: See attached

IX. Course Requirements and Methods of Evaluation:

Cumulative written final: 80%

Laboratory observation: 10%

Classroom participation: 10%