

PP-DPT 65 UNIT TRACK CURRICULUM 2013-2015

AHCJ 507 *Pharmacology in Rehabilitation Science* (3)

Principles of pharmacology as related to diagnosis, prevention, and treatment of disease-including a presentation of the pharmacology and therapeutic value of drug used in rehabilitation medicine. Related topics include pharmacokinetics, pharmacodynamics, adverse effects, drug interactions, and drug toxicity-with special consideration given to pediatric and geriatric pharmacology.

AHCJ 511 *Biostatistics* (3)

Fundamental procedures of analyzing and interpreting data, sampling probability, normal distribution, sampling distributions and standard error, confidence intervals hypothesis testing, t-tests, chi-square, correlation, Introduction to regression and one ANOVA. Interpretation of computer output and use of the SPSS statistical package for data analysis.

AHCJ 516 *Clinical Imaging* (3)

Studies the etiology, pathogenesis, and clinical manifestations of selected bone and joint pathologies. Discusses current literature for selected pathologies.

AHCJ 518 *Advanced Physiology I: Neurobiology* (3)

Surveys cell and whole-body physiology. Includes physiology of the neuron and nerve conduction, molecular transport at the cellular level, cardiovascular and renal physiology, gastrointestinal physiology, endocrinology, and neurophysiology. Emphasizes muscles and neurophysiology as they relate to the cardiovascular, respiratory, and endocrine systems.

AHCJ 527 *Medical Screening for Rehabilitation Professionals* (3)

Screening for non-neuromusculoskeletal origins for the musculoskeletal complaints of patients who commonly seek rehabilitation. Particularly emphasizes components of the history and physical examination that suggest medical pathology requiring referral and/or physician consultation. Knowledge and skills related to screening for medical pathology in patients with musculoskeletal complaints of the lumbar spine, pelvis, lower extremities, thoracic spine, shoulder girdle, and upper extremities.

AHCJ 528 *Lifestyle Health and Wholeness* (3) (Web-based)

Explores current lifestyle health and diseases, including: cardiovascular, metabolic, communicable, and nutritional. Explores concepts regarding risk factors, screening approaches, and risk reduction, focusing on their impact on specific health parameters. Addresses the universal problem of personal health and the influence of lifestyle on health and lifestyle disease. For the beginner as well as for the health professional who wishes to attain or maintain good whole-person health and freedom from disease by such natural means as minimizing the use of prescription drugs, food supplements, and diet fads. Presents specific lifestyle advice to attain these goals. Addresses disease prevention as well as treatment through whole-person lifestyle, evidence-based measures. A “whole-person” approach-mind, body and spirit-with a biblical perspective that explores the influence of the mind and the spirit/religiosity on lifestyle health. Additional project required for fourth unit.

AHCJ 551 *Professional Systems in Management* (3)

Administering the academic department: personnel selection, development, and evaluation; finance; team development; and leadership philosophies.

AHCJ 591 *Research & Statistics I* (2)

Introduces the scientific methods in health-science research. Focuses on the major steps of the research process: problem identification, literature review, conceptual framework, identification of variables, statement of hypothesis, experimental design, and analysis and presentation of data. Includes critical evaluation of research literature. Applies the research process to problems in related specific allied health fields. Pilot-tests a research proposal. Tests procedures and data forms. Data collection on study subjects.

AHCJ 605 *Critical Analysis of Literature* (3)

Evaluates the scientific literature, including critical evaluation of the rationale for the study; population inclusion/exclusion criteria; sampling and randomization techniques; sample size; appropriateness of the research design; choice of the data analysis; structure and content of tables and graphs; interpretation of statistical results; and applications to practice. Students evaluate research articles by answering questions posed by the instructor in a Web discussion board and virtual classroom. Students submit weekly evaluation papers for the articles discussed.

PHTH 529 *Pathokinesiology of Gait* (3)

Advanced observational analysis of normal and abnormal human locomotion, with comparison of pathological differences.

PHTH 531 *Soft-tissue Mobilization* (3)

This course is designed to develop a fundamental clinical-reasoning process for management of soft tissue impairments through the following avenues: identification and analysis of common patterns of postural and movement imbalances, ascertaining location of movement restrictions in the soft tissue, developing a treatment strategy to correct musculoskeletal imbalances and effectively implementing an appropriate treatment program utilizing soft tissue techniques. Emphasis will be placed on kinesiology, clinical patterns and clinical implications of muscle flexibility or motor control deficits of the muscles in concert with recognizing and demonstrating proper body mechanics/movement fundamentals during the performance of manual therapy procedures. Efficacy of treatment will be accurately determined through specific reassessment of subjective and objective data.

PHTH 541 *Advanced Clinical Practice I* (3)

Student demonstrates and practices advanced examination, assessment, and treatment of the lumbar spine, pelvic girdle, and lower extremities. Lecture and demonstration.

PHTH 542 *Advanced Clinical Practice II* (3)

Emphasizes skills utilized by clinical specialists in neurophysical therapy. Content based on the description of PHTH 541.

PHTH 543 *Advanced Clinical Practice III* (3)

Advanced clinical decision-making skills, with focus on patient classification, clinical-diagnosis practice parameters, and practice guidelines. Emphasizes development of clinical algorithms, clinical prognostic skills, and outcome measures.

PHTH 545 *Orthopaedic Intervention* (3)

An advanced study of the management of orthopaedic and neurological disorders of the extremities. This is a clinical course designed to strengthen your knowledge and application of mobilization techniques to the joints and nerves of the periphery through lecture, laboratory sessions, case studies, and/or cadaveric specimen guided study (as available).

PHTH 548 *Function-Based Rehabilitation* (3)

This course covers current physical therapy trends relevant to adult neurological rehabilitation. Areas of emphasis include PNF and NDT, Neurological and orthopaedic rehabilitation strategies are integrated. Students will be exposed to material through a combination of lecture, discussion, presentation, and laboratory sessions.

PHTH 628 *Movement Science: Upper Extremities* (3)

Presents theories, research, and clinical applications related to the pathomechanics of spine and upper extremity injuries. Utilizes clinical reasoning and evidence-based practice to support the role of muscular imbalance in the pathogenesis of common orthopaedic disorders of the upper quarter. Provides an understanding of how faulty biomechanics can contribute to spine and upper extremity injuries. Provides a foundation to assist in the diagnosis of movement-related impairments. Supervises students in hands-on laboratory sessions to teach analysis of normal and abnormal movement patterns of the upper quarter. Provides laboratory time to develop skills needed to perform a thorough evaluation of movement dysfunction focusing on the upper quarter. Assists in the development and design of specific interventions aimed at changing movement dysfunctions of the upper quarter.

PHTH 629 *Movement Science: Lower-Quarter Biomechanical Relationships* (3)

Presents theories, research, and clinical applications related to the pathomechanics of lumbar spine and lower extremity injuries. Utilizes clinical reasoning and evidence-based practice to support the role of muscular imbalance in the pathogenesis of common orthopaedic disorders of the lower quarter. Provides an understanding of how faulty biomechanics can contribute to lumbar spine and lower extremity injuries. Provides a foundation to assist in the diagnosis of movement-related impairments. Supervises students in hands-on laboratory sessions to teach analysis of normal and abnormal movement patterns of the lower quarter. Provides laboratory time to develop skills needed to perform a thorough evaluation of movement dysfunction focusing on the lower quarter. Assists in the development and design of specific interventions aimed at changing movement dysfunctions of the lower quarter.

RELR 525 *Health Care and the Dynamics of Christian Leadership* (3)

Christian principles of leadership in the community and in the practice of health care. Additional project required for fourth unit.

ELECTIVES (Choose 3)

AHCJ 508 *Current Issues in Basic Science* (3) ELECTIVE

Studies the current issues in basic science as related to physical therapy. Topics may include current advances in biomechanics, cell and molecular biology, tissue engineering and transplants, pharmacology, and presentation of basic science research. Lecture and discussions of current literature.

PHTH 515 *Sports Medicine: Topics in Rehab* (3) Elective

This sports medicine in physical therapy class will emphasize the following 6 topic areas: 1) Side-line and on-the-field sports injury assessment including concussion management (football and other contact sports), 2) Sports/athletic taping for injury prevention and performance, 3) Return-to-Sports Participation program, 4) Running and cycling biomechanical assessment and fitting, 5) Training for running and/or cycling participation, and 6) PossAbilities Loma Linda University Medical Center East Campus program enables the disabled community to fully integrated into society including sports participation such as triathlons and hand cycling. A number of field trip opportunities will be offered from which the student will choose 3 to participate to include but not limited to high school football game coverage, local sports events such as a local running competition, bicycle fitting at a local bicycle shop, and a PossAbilities event. Class size will be limited.

PHTH 546 *Womens's Health Issues* (3) ELECTIVE

Clinical aspects of women's health issues. How to develop a womens's health program in the clinical setting. Introduces various pathologies and treatment strategies for specific diagnoses that could be encountered in the clinical setting. Women's health during adolescence, the reproductive years, and the geriatric years.

PHTH 549 *Vestibular Rehabilitation* (3) ELECTIVE

Physical therapy evaluation and treatment planning strategies for individuals with balance impairments due to neurological pathologies including central and peripheral vestibular dysfunction resulting in impairments, functional limitations, and disabilities. Emphasis is placed on the application and integration of theoretical constructs, evidence-based practice, examination, evaluation, diagnosis, prognosis, intervention, and measurement of outcomes.

PHTH 550 *Integrative Approach to Early Rehabilitation* (3) ELECTIVE

Advanced study in acute and skilled nursing facility rehabilitation as it applies to the early physical therapy rehabilitation process. Emphasis will be placed on cardiopulmonary coding systems, evaluations for acute rehabilitation including spinal cord injury and cardiovascular accident patients. Effective tools and physical therapy advances in evidence based practice will be emphasized.

PHTH 551 *Advanced Orthopaedic Procedures I* (3) Elective

Student demonstrates and practices advanced examination and treatment of the lumbar spine, pelvic girdle, and lower extremities.

PHTH 552 *Advanced Orthopaedic Procedures II* (3) Elective (Pre-req PHTH 551)

Student demonstrates and practices advanced examination and treatment of the cervical spine, shoulder girdle, and upper extremities.

PHTH 556 *Cardiopulmonary Approaches to Assessment, Wellness, and Disease* (3) ELECTIVE

Review of pathology, etiology, and clinical manifestations of cardiopulmonary disorders commonly encountered by the physical therapist. ECG interpretation and assessment. Practical strategies in the management of patients/clients at risk for chronic vascular disease. Comprehensive overview of the epidemiology, risk factor identification, assessment, and intervention to remediate or ameliorate risk and negative health effects of metabolic syndrome. Emphasizes evidence-based research to guide the development of assessment, prevention, and intervention strategies.

PHTH 560 *Neurologic Upper Extremity Management* (3) ELECTIVE

An evidence-based course that covers the functional implications of neurological pathologies and emphasizes current clinical management of the upper extremity. Topics include spasticity, soft tissue and joint mobilization, constraint-induced movement therapy, and proprioceptive neuromuscular facilitation.

PHTH 630 *Kinetics* (3) ELECTIVE

Examines the mechanical basis of movement in the human body in relation to the length of muscles; the tension developed by muscles under various conditions; the anatomical arrangement of the origin and insertion of the bones and joints and the biomechanics of complex movement, such as gait and balance. Uses physics principles to explain the mechanics of movement, rotational movement, work and energy, muscle-length tension relationships, single and multiple joint biomechanics, and gait and balance.

PHTH 634 *Cervical Spine* (3) ELECTIVE

Expands and applies the framework for examination and intervention to patients with musculoskeletal conditions of the cervical spine. Presents knowledge and skills--evidence-based and best practice; and the format for evaluation and treatment of a patient using advanced orthopaedic skills for the cervical spine. Differentiates clinical conditions and enhances clinical decision making--thus helping the student integrate manual therapy into a patient's plan of care. Links clinical practice guidelines to the International Classification of Functioning, Disability, and Health. Emphasizes clinical guidelines for impairment and function-based diagnosis, examination, and intervention.