

PHT (Physical Therapy)

PHT 201 Introduction to Physical Therapy Lec.2./Credit 2

In this course, the student will learn about the profession of physical therapy, issues and trends in physical therapy, the health care delivery system and basic skills and procedures which form the foundation of the physical therapy educational program. Prerequisite: Permission of the department chairperson. This course is open to undergraduates only.

PHT – Graduate Only

PHT 600 Anatomy Lec.2./Lab 6./Credit 6

In this course, the student will learn the basic techniques of dissection and the components of the musculoskeletal system. Emphasis will be placed on the musculoskeletal system and corresponding nerves with review of the cardiovascular, pulmonary and integumentary systems. Students will learn surface anatomy and palpation techniques as part of the Anatomy Laboratory. Prerequisites: General Biology, Human Anatomy, Human Physiology.

PHT 602 Kinesiology Lec. 3./Lab 3./Credit 4

In this course, the student will learn the basic concepts of biomechanics. The course will cover how to describe motion and how to analyze human motion. Emphasis will be put on the description of the design and function of joints and muscles and pathokinesiology of movements. Principles of mechanics will be applied to human movement. Discussion of the impact of injuries on movement patterns will be based on direct observation or videotape of children, adults and older individuals. Prerequisites: College Physics, Human Anatomy.

PHT 604 Tests and Measurements Lec. 4./Lab 3./Credit 5

This course covers musculoskeletal assessment to include strength testing, joint motion, posture, sensation and girth. The student is introduced to background information on the basic principles of test standardization to enable him/her to perform a physical therapy assessment using critical and analytical observational skills, goniometric measurements, manual muscle measurements, girth measurement, and sensory testing. Prerequisites: Human Anatomy, Introduction to Statistics.

PHT 606 Exercise Physiology Lec. 3./Credit 3

This course outlines the physiological effects of exercise on the cardiovascular, pulmonary and musculoskeletal system. It explores the role of exercise in the development of strength, power, muscular endurance and cardiovascular endurance in normal and physically impaired individuals of all ages. Application of testing procedures for treatment planning will be discussed. Prerequisites: Human Physiology, Human Anatomy, Chemistry.

PHT 607 **Motor Control and Learning** **Lec.2./Credit 2**

This is a two-part course designed to provide students the opportunity to learn topics in movement sciences throughout lifespan. The first part will emphasize basic theoretical concepts and principles of motor development, control and learning to set for the foundation for application. The second part will emphasize application and discussions of the contemporary knowledge of motor control and learning to individuals with movement dysfunctions. This course will also introduce effective motor re-learning strategies for physical therapy intervention. Prerequisites: courses in curriculum sequences.

PHT 609 **PT Seminar I: The Profession** **Lec. 1./Credit 1**

This course is the first in a series of three courses focusing on orienting students to the philosophy and conceptual framework of the DPT curriculum. The principles of professional behavior in their role as students and future health care practitioners are emphasized as students learn the conceptual framework of the patient/client management model using the Guide to Physical Therapy Practice. Prerequisites: courses in curriculum sequences.

PHT 611 **Basic Skills in Physical Therapy** **Lec. 3./Lab 3./Credit 4**

This course is an introduction to basic physical therapy examination, patient management and mastery of basic intervention skills in common chronic or acute conditions involving the musculoskeletal system. This course will emphasize the process of chart review, observation of movement patterns, basic elements required to make a diagnosis. In this course students will also be taught the interpretation of basic data about range of motion, muscle strength, age considerations, socioeconomic status, and cultural environment to plan physical therapy interventions. The student is introduced to the disablement model as the basis for clinical decision-making. Intervention skills will also include training and teaching patient/client in the use of assistive devices, exercise equipment, transfers and application of moist heat and cold modalities. Prerequisites: courses curriculum sequence.

PHT 612 **Pathology** **Lec. 3./Credit 3**

This Pathology Course is designed for the physical therapy student to meet the challenge of understanding the basic concepts of disease processes in the human body. The knowledge of disease processes will be helpful in the differential diagnosis process and the development of a treatment plan that include realistic goals and is consistent with prognosis of the disease. The course is divided into two parts. Part I is a General Pathology, which deals with the basic principles and characteristics of disease processes that may involve any tissue or organ of the body and underlie all diseases. Part II is Systemic Pathology, which deals with the pathophysiologic processes that affect specific tissues and organ systems of the body. A clinical pathological approach i.e. ability to understand, interpret and correlate patients clinical signs and symptoms with the underlying pathophysiologic process will be emphasized. Prerequisites: courses in curriculum sequence.

PHT 614**Neuroscience****Lec. 4./Credit 4**

Introduction to neural systems and basic neuroanatomy/neurophysiology including cranial and peripheral nerves; brainstem, midbrain and cortical anatomy; vascular brain anatomy; cellular neurophysiology, basic neuromuscular physiology; spinal reflexes; basic control systems applied to neural systems including segmental, motor control, oculomotor and postural control system; an introduction to neuroimaging and neural plasticity. One hour every week will be devoted to discussion of issues with clinical relevance in Physical Therapy. Prerequisites: Human Anatomy, Human Physiology.

PHT 615**Case Management Lab I****Lab 3./Credit 1**

This is the first of four courses designed for students to develop problem solving and critical thinking skills while working in small groups with student centered learning. In this first course students will be given simple cases involving real patients or simulated cases with a discrete musculoskeletal problem (joint limitation and pain) as a result of a common disease process or injury in young adults and the mature adult of various socioeconomic and cultural backgrounds. Students are encouraged to work collaboratively to identify and practice the steps of clinical decision making according to the patient/client management model. For each case the student is expected to identify the pathology, the impairments resulting from the pathology, the related functional limitations and the resulting disability before establishing functional goals and a plan for intervention. A formal oral and written presentation of the case will be expected at the end of the course for each group. In this course students are also introduced to reflective evaluation using self-assessment and peer assessment after each group meeting and after the formal oral presentation. Prerequisites: courses in curriculum sequence.

PHT 618**Research I****Lec. 2./Credit 2**

This course is designed for the student to learn the basic language, logic, principles, concepts and procedures of research including a review of statistics as they apply to quantitative and qualitative research. It also introduces the framework and terminology of evidence-based practice (EBP), which is built on the application of research into decision-making for patient/client management in physical therapy. This course includes the processes of developing a clinical question, locating and accessing sources of evidence to answer that question and the beginning of abstracting the evidence for practice. Prerequisites: courses in curriculum sequence.

PHT 620**Pharmacology****Lec. 2./Credit 2**

This course is designed to acquaint each student with the general principles of Pharmacology. Pharmacology is the Science that deals with the mechanism of action, utilization and adverse effects. Using this description, the classification of various therapeutic agents will be analyzed. Furthermore, the course will focus on concepts, principles and applications of pharmacotherapeutics used by the physical therapists in the management of physical disabilities, movement dysfunction and pain resulting from injury, disease, disability or other acute or chronic health related conditions. Prerequisites: courses in curriculum sequence.

PHT 623**Case Management Lab II****Lab. 3./Credit 1**

This is the second course required in the continuum of integration of all course materials covered in previous semesters and in the current semester using a clinical problem solving format. Cases presented in this course emphasize the examination, diagnosis, prognosis and intervention for real or simulated patients with neuromuscular disorders and underlying musculoskeletal dysfunction. Cases in this course will emphasize examination procedures, diagnostic process, intervention and outcome for neuromuscular dysfunction across the lifespan. In this course psychosocial adjustment to disability for the patient and the family/caregiver and financial ramifications of the disability are explored. Students are asked to analyze and synthesize the data collected from the examination to formulate a diagnosis using the Practice Patterns from the Guide to Physical Therapy Practice. Students are expected to use evidence available in the literature to support their intervention and evaluate outcomes. The product at the end of the course is a formal oral and written presentation of cases assigned involving demonstration of treatment interventions using videotapes. Students are also expected to conduct self-assessment and peer assessment after each group meeting and after the formal oral presentation.

PHT 625**PT: Seminar II: Psychology of Disability Lec. 1./Credit 1**

This course has a major emphasis on the analysis of the physical therapist relationship with patients/clients, family and community investigation through specific readings in the psychology of disability and the socio economic and cultural impacts on optimizing function for individuals with disability. Prerequisites: courses in curriculum sequence.

PHT 630**Prosthetics and Orthotics****Lec. 3./Credit 3**

In this course students will learn to apply their knowledge of kinesiology, pathology and client management model to the care of individuals requiring prosthetic and orthotic devices. This course will also emphasize preventive foot care, pre and post surgical physical therapy interventions and functional rehabilitation of individuals with congenital, traumatic and circulatory conditions requiring prosthetic or orthotic devices. Prerequisites: courses in curriculum sequence.

PHT 631**Clinical Education I (Off Campus)****Credit 4**

The first clinical education experience occurs in the curriculum after students have completed their coursework in examination and intervention for the adult patient with orthopedic and neurologic dysfunction. During this clinical experience, the students are expected to develop an appreciation for the scope of the role of the physical therapist and how physical therapy interventions fit into the patient-centered model of health care delivery. Under the guidance of a clinical instructor, students will begin to apply the examination, evaluation, diagnosis, prognosis and intervention skills learned thus far in the curriculum with direct patient application. Over the clinical experience, students should become competent with chart review, patient interview, selection, administration and interpretation of tests and measures and in the analysis of test findings to establish a physical therapy diagnosis. It is expected that students at this level will need guidance in establishing prognosis and length of stay for the patients they treat and integrate information to develop cost-effective and realistic plans of care. Students will

develop their communication and group work skills when interacting with patients, caregivers, preceptors and other members of the team working with the patient. Students will begin to develop competence in documenting the results of their examination, evaluation and diagnosis, establish therapy goals and plans of care as well as patient progress in meeting established functional outcomes. Finally students will begin to evaluate their performance and seek out resources to minimize deficiencies in identified areas. Prerequisites: courses in curriculum sequence.

PHT 634 Neurologic Management I Lec. 2./Lab 4./Credit 4

The educational vision for this course is to develop reflective autonomous physical therapists qualified to maximize functioning and minimize disability in persons with Central Nervous System (CNS) Health Conditions. Teaching and learning strategies implemented facilitate the development of student professional affective, cognitive and psychomotor behaviors required for physical therapist practice. The course is sectioned into two units of study: 1. Healthcare Management of Persons with Brain Conditions; and, 2. Healthcare Management of Persons with Spinal Cord Conditions. Prerequisites: courses in curriculum sequence.

PHT 635 Cardiopulmonary Physical Therapy Lec. 3./Lab 3./Credit 4

This course builds on the information provided in anatomy, neuroscience, basics skills in physical therapy practice and exercise physiology. It provides expanded exposure to the normal physiology of the cardiac, vascular and pulmonary system. Pathophysiology of specific cardiac and pulmonary conditions are explored as they relate to the functional performance, compensation for disease processes and implications for physical therapy patient/client management over the life span. This course will also provide the students with the knowledge of decision-making strategies for contemporary clinical practice for patients/clients with multiple medical diagnoses. Prerequisites: courses in curriculum sequence.

PHT 640 Case Management Lab III Lab 1./Credit 1

In this third course in the continuum of integration to develop and achieve competency in clinical problem solving, small groups of students are given real or simulated cases with non-critical multi-system disorders. In this course the emphasis is on formulating a diagnosis based on the data collected, adjust and or create interventions based on clinical decision making algorithms, use outcome assessment and clinical experience gathered in Clinical Education I and II to delegate and coordinate care with physical therapy assistants and other support personnel in various practice settings. Intervention strategies are expected to be supported by evidence gathered from the literature. Prerequisites: courses in curriculum sequence.

PHT 641 Clinical Education II (off campus) Credit 4

This course is the second full time clinical education experience occurs in the curriculum after students have completed additional coursework in examination and intervention for the adult patient with orthopedic and cardiopulmonary dysfunction. During this clinical experience students are expected to

show competence in review of the medical record; interview of the patient and his family; selection, implementation and interpretation of tests and measurements; and in establishing a diagnosis. Students should be independent in establishing goals and physical therapy plan of care and in evaluating its effectiveness. Students should be able to document the results of the examination, evaluation and diagnosis; therapy goals and intervention plans; and the patients' progress toward established outcomes. Students should demonstrate the communication skills needed to be effective in interacting with the patient and his family, team members and the clinical instructor. In addition, students should be active in self-evaluation and in seeking out resources to meet identified deficiencies. Students are expected to justify his/her clinical decision-making. Students should be able to describe the health care delivery model in the facility and begin to analyze the implications of this model on clinical decisions about the length of stay, interventions, patient education, referral to community resources and/or to other practitioners. Prerequisites: courses in curriculum sequence.

PHT 642

PT Seminar III: Ethics

Lec.2./Credit 2

This course provides students a forum to discuss Practice issues and trends in Physical Therapy. Legal and ethical practice will be discussed in relation to ethical theory, practice regulations. Students will have an opportunity to explore problem analysis and clinical decision – making within an ethical framework. The impact of ethics and public policy on health care practice in general will be discussed. Prerequisites: courses in curriculum sequence.

PHT 643

Musculoskeletal Management I

Lec. 1.5./Lab 1.5./Credit 3

The course is designed for learning and teaching entry-level physical therapy students the healthcare Process Solving for Individuals with Neuromusculoskeletal Disorders. The World Health Organization (WHO) concepts of Health, Functioning and Disability (ICIDH-2), together with the APTA Guide to Physical Therapist Practice² are used to structure learning into four study units: UNIT 1: Principles of Healthcare for individuals with Neuromusculoskeletal Disorders UNIT II: Individuals with Head, Neck, Spine & Pelvis Disorders. Prerequisites: courses in curriculum sequence.

PHT 645

Pediatrics

Lec. 3./Lab 3./Credit 4

This course is designed to prepare students to acquire safe, effective and evidence-based pediatric physical therapy management skills for children with neuro-musculoskeletal, cardiopulmonary and other pediatric physical therapy related impairments. This course utilizes the National Center for Medical Rehabilitation Research (NCMRR) model and the Guide to Physical Therapist Practice that include evaluation, differential diagnosis, treatment goals and plan, intervention strategies and documentation of prognosis, progress and functional outcome measures. This course emphasizes interaction with clients' family and multidisciplinary team members at various settings such as homes, schools, clinics, community centers and hospitals to maximize the functional carry-over of the intervention. Prerequisites: courses in curriculum sequence.

PHT 647 Community Health (Off Campus) Lec. 3./Credit 3

This course is designed to guide the students in developing and implementing a plan for community involvement with the elderly, children or the disadvantaged. Community involvement to promote wellness and prevention of movement disorders will be the focus of the professional involvement in these communities. Prerequisites: course in curriculum sequence.

PHT 649 Musculoskeletal Management II Lec. 3./Lab 3./Credit 4

The course is designed for learning and teaching entry-level physical therapy students the healthcare Process of Problem Solving for Individuals with Neuromusculoskeletal Disorders. The World Health Organization (WHO) concepts of Health, Functioning and Disability (ICIDH-2), together with the APTA Guide to Physical Therapist Practice are used to structure learning into four study units: UNIT I Individuals with Lower Quarter Disorders. UNIT II Individuals with Upper Quarter Disorders. Prerequisites: courses curriculum sequence.

PHT 651 Neurologic Management II Lec. 1.5./Lab 1.5./Credit 3

The educational vision for this course is to develop reflective autonomous physical therapists qualified to maximize functioning and minimize disability in persons with Peripheral Nervous System (PNS) and Neuro-Muscular Health Conditions. Teaching and learning strategies implemented facilitate the development of student professional affective, cognitive and psychomotor behaviors required for physical therapist practice. The course is sectioned into two units of study: 1. Healthcare Management of Persons with Peripheral Nervous System Conditions; and, 2. Healthcare Management of Persons with Neuro-Muscular Conditions. Prerequisites: courses curriculum sequence.

PHT 653 Physical Therapy Administration and Management Lec. 3./Credit 3

This course will provide students opportunities to develop managerial and supervisory skills in any health care setting where PT is provided. The health care system in the United States will be covered. The student will be exposed to topics as financial management, facility planning, writing business proposals, effective communication, human resources, leadership styles, delegation, time management, crisis management, risk management and legal considerations, consultation services, entrepreneurship and management information systems. Business principles will be presented as they relate to ability to generate a budget, adhere to regulations and interactions with other professionals as team members or as administrators. Prerequisites: PHT 622

PHT 655 Research II Lec. 2./Credit 2

The purpose of this course is to apply the broad concepts of research methods and design in the framework of evidence-based practice to specific clinical problems. The student will find, organize, critically analyze and document evidence found in physical therapy and related literature related to diagnosis, prognosis, intervention and outcome for patient/client management. Students will identify and EBP project to be completed in PHT 673 Research III and PHT 668 Research IV.

PHT 659**Case Management Lab IV****Lab. 3./Credit 1**

This is the final course in a series of courses designed to enhance students' ability to engage in problem – solving, critical thinking skills in the examination, diagnosis, prognosis, intervention and outcome assessment of simulated cases with critical and non-critical multi-system involvement. The emphasis of this course will be the incorporation of students' knowledge and skills acquired in the classroom and in the clinic to be competent practitioners. Students are expected to use relevant research to guide clinical decisions and interventions. It is also expected that students are competent in addressing simple and complex problems throughout the life-span. Competency in communication and collaboration with other health professionals in the evaluation of treatment outcomes, psychosocial and cultural aspects of health care are also expected. At the end of this course students should demonstrate good clinical judgement in the current health care environment and incorporate in their problem solving exercise all the elements of good physical therapy practice.

PHT 661**Clinical Education III (Off Campus)****Credits 4**

This is the third of four full-time clinical experiences. This clinical experience occurs after students have completed all course work on examination and interventions for the patient with orthopedic, neuromuscular and cardiopulmonary dysfunction across the lifespan. In addition, students have completed administration and management, professional and ethical and legal issues and research. During this clinical experience, students are expected to show competence and independence in the comprehensive management of the adult patient with a simple musculoskeletal or neurological diagnosis and show competence with occasional guidance from the clinical instructor in the management of patients with complex multi-system diagnoses. Students are expected to seek out evidence for his or her clinical decisions on test and treatment interventions. Students will also participate in indirect patient care roles such as education of peers and other health care professionals and fiscal management and reimbursement, research and consultation. Students are also expected to be active in self-assessment and in seeking resources to eliminate identified deficiencies or weaknesses.

PHT 663**Special Topics****Lec. 2./Credit 2**

This course is designed to refine assessment and therapeutic skills in specific PT specialties: alternate therapy, manual therapy, aquatics, pediatrics, geriatrics, health promotion, women's health and sports medicine. This course will consist of a series of lectures/demonstrations by clinic experts.

PHT 664**Differential Diagnosis****Lec. 3./Credit 3**

This course provides students the skills of differential diagnosis in physical therapy that will prepare them to be competent practitioners in the current health care environment of independent practice under direct access laws. The course covers the screening and examination of patients/clients and the clinical signs and symptoms of systemic dysfunctions. In this course, students are expected to recognize signs and symptoms of disease processes that may masquerade as neuromusculoskeletal dysfunctions. The course will include the differential screening, interview process and overviews of clinical signs and symptoms for each system.

PHT 665 Comprehensive Exam Part I Lec. 1./Credit 1

This course is designed to prepare students for the Licensure Exam. The content outline of the Licensing Exam for physical therapists and the application process for licensure in any state will be reviewed based on publications by the Federation of State Boards of Physical Therapy. Students will establish a plan for the comprehensive review of materials covered in the three-year course of study. The emphasis of the course will be on strategies for test taking skills, practice drills for problem solving and critical thinking using multiple choice exam format.

PHT 666 Sports Physical Therapy Lec. 2./Credit 2

This course is designed to introduce the student to general principles of injury prevention, general and specific sports conditioning and the rehabilitation of athletic injuries. The topics will address the needs of both the recreational and competitive athletes. Prerequisites: PHT 632, 660

PHT 668 Research III Lec. 1./Credit 1

This course is designed to individually guide students to begin their EBP project, which allows each student to apply EBP to the processes of examination, evaluation, diagnosis, prognosis and interventions of selected conditions across the lifespan seen in physical therapy.

PHT 669 Clinical Education IV Cln./Credit 4

This is the capstone 8-week clinical experience that occurs after students have completed all coursed in the curriculum and 24 weeks of full time clinical experience. During this experience, students are expected to show competence and independence in the comprehensive management of patients across the lifespan with simple and complex multi-system diagnoses. Students are expected to seek out evidence for their clinical decisions in the clinical arena and seek advice from expert clinicians to guide their future career plans and explore areas of physical therapy practice that they plan to pursue. Students at this level are expected to perform at entry-level practice.

PHT 673 Research IV Lec. 1./Credit 1

This course is designed to individually guide students in completing and presenting their EBP projects.

PHT 675 Teaching/Learning Lec. 2./Credit 2

This course is designed to provide information on learning and teaching methodology, planning of learning experiences, clinical teaching tools and strategies, formulation of objectives, effective feedback and performance evaluation within the context of adult education. This course will also address the issues of the effects of age and culture on learning styles and health interventions. The course includes lectures, discussion, small group learning experiences and a terminal project requiring application of didactic information.

PHT 677**Clinical Education V****Cln./Credit 4**

Clinical Practice V documents the final 320 hours of clinical practice. During this experience, students are expected to show competence and independence in the comprehensive management of patients across the lifespan with simple and complex multi-system diagnoses. Students are expected to seek out evidence for their clinical decisions in the clinical area and seek advice from expert clinicians to guide their future career plans and explore areas of physical therapy practice that they plan to pursue. Students at this level are expected to perform as novice autonomous practitioners.

PHT 679**Comprehensive Exam Part II****Credit 1**

The successful completion of a computerized final comprehensive exam is required for graduation. The format of the test is similar to the Licensure Exam that students will be required to pass in order to practice physical therapy in any state.