Academic Coursework Preceding Clinical Experience III: PT 675

BIO 639 Human Gross Anatomy (6)
This is a lecture and laboratory course in human gross anatomy, which uses cadaver dissection and other materials illustrative of human anatomy. Emphasisis placed on the anatomy of skeletal muscles, including their bony attachments, nerve and blood supply, and functions in movements. Additional dissections involve a survey of abdominal and thoracic organs, anatomy of the head and contents of the cranial cavity.Prerequisites: BIO 507L and BIO 508L.

GRA 601 Research Methodology and Design (3)
This course reviews and critically analyzes components of research design, including collection of data. Emphasis is placed on the professional as producer and consumer of research. Prerequisites: Graduate level standing, GRA 600 and four-credit Applied Statistics or equivalent, or competency test. Offered in fall and spring semesters.

PT 500 Basic Skills I (3)
This course introduces the student to clinical skills essential for practice entry. Students will receive instruction in evaluation skills including manual assessment of muscle strength, joint mobility, vital signs, perceived exertion, transfer training, gait training, use of assistive devices and functional examination including upper and lower quadrant screening. Related concepts include professional communication (verbal and non-verbal); documentation; and patient, family and community education. Format: lecture, discussion, group and individual presentations, with possible fieldwork.

PT 500L Basic Skills I Lab (1)
This course introduces the student to clinical skills essential for practice entry. This course presents basic examination, evaluation skills and intervention strategies for management of patients with emphasis on subacute level of care. Students will receive instruction in examination skills including evaluation of muscle strength, joint mobility, vital signs, perceived exertion, transfer training, gait assessment and training, and functional examination including upper and lower quadrant screening. Lab experiences include skill development in goniometric, manual muscle testing, vital signs, perceived exertion, positioning, draping, transfer and gait training and wheelchair measurement and mobility. Fieldwork experiences may be included.

PT 502 Pathophysiology for Physical Therapists (3)
Knowledge of the pathology of disease has always stood as one of the fundamental prerequisites to safe and effective health care practice. This course is an introduction to the basic principles of human pathology with emphasis on disease processes and their pathophysiology, etiology, and signs and symptoms. This course will familiarize the student with how the systems of the body function and malfunction in disease with regard to healing, inflammation, infection, immune response, and neoplasia. Most importantly, you will learn the implications of these pathologic conditions on the physical therapist.

PT 503 Clinical Orientation Seminar I (0)
This administrative course is presented in a seminar format and is essential for the planning and management of the Clinical Education portion of the physical therapy curriculum. Policies and procedures will be reviewed as will the Clinical Education Manual. Topics of relevance to the clinical education portion of the program will be discussed. Clinical site selection for Clinical Fieldwork I (PT 574) and Clinical Fieldwork II (PT 674) will take place during this course.

PT 504 Clinical Orientation Seminar II (0)
This administrative course is presented in a seminar format and is essential for the administration of the Clinical Education portion of the physical therapy curriculum. Policies and procedures for clinical education will be reviewed. Topics of relevance to the clinical education portion of the program will be discussed. APTA Clinical Performance Instrument will be introduced. Clinical professional preparation for first clinical fieldwork (PT574) will occur in this course.

PT 505 Introduction to PT and Health Care Systems (2)
This course introduces the student to knowledge essential for practice entry. Discussion topics include health care systems (dominant and world models), definition of the health care professional in general, and specifically the P.T., including the scope of practice, the APTA, Standards of Practice, the Practice Guide, and Code of Ethics. Class discussions are an important part of this class.

PT 506 Physiology of Therapeutic Exercise (2)
This is the didactic portion of PT 506. The contemporary physical therapist utilizes exercise as a therapeutic agent in the clinical management of a variety of pathological conditions. The student requires a firm and comprehensive foundation in current exercise-related knowledge and concepts which provide the scientific bases for rational evaluation of relevant physiological parameters in patients, and for the design, monitoring and modification of specific exercise training procedures devised for dysfunctional conditions. The major objective of this course is to introduce the physiological bases for exercise. The emphasis will be on the study of normal human movement. The latest scientific and theoretical information will be examined. The course includes didactic and small group experiences.

PT 506L Physiology of therapeutic Exercise Lab (1)
This is the laboratory component of PT 506. The contemporary physical therapist utilizes exercise as a therapeutic agent in the clinical management of a variety of pathological conditions. The student requires a firm and comprehensive foundation in current exercise-related knowledge and concepts which provide the scientific bases for rational evaluation of relevant physiological parameters in patients, and for the design, monitoring and modification of specific exercise training procedures devised for dysfunctional conditions. The major objective of this course is to introduce the physiological bases for exercise. The emphasis will be on the study of normal human movement. The latest scientific and theoretical information will be examined. The course involves laboratory experiences.

PT 509 Life Span Development (3)
This course examines physical, cognitive, and psychosocial aspects of normal human development as they relate to physical therapy practice.

PT 509L Life Span Development Lab (1)
This laboratory section provides the foundation for the understanding of normal development from birth through adolescence. This lab will encompass the assessment of developmental reflexes, righting and equilibrium responses, stages of motor control and fundamental movement patterns. Laboratory experiences include skill development in specialized testing techniques and observation of normal development.

PT 510 Basic Skills II (3)
This course, in conjunction with knowledge and skills acquired in Basic Skills I, introduces clinical skills essential for practice entry. Practice competencies will include but are not limited to integumentary assessment (e.g. wound care), the therapeutic use of electromodalities, massage, edema control, and

functional exercise. Demonstration of competency in basic clinical skills emphasizes maintaining a safe and therapeutic environment, professional communication and behaviors, and effective client education. Format: lecture and small group tutorial.

PT 510L Basic Skills II Lab (1)
Practice competencies will include but are not limited to the therapeutic use of electro-modalities, massage, wound management, edema control, and functional activity assessments. Demonstration of competency in basic clinical skills emphasizes maintaining a safe and therapeutic environment, professional communication and behaviors, and effective client education. Format: lab and field observations.

PT 512 Functional Anatomy (1)
This is the didactic portion of PT 512. The physical therapist must have a strong understanding of human anatomy and its relationship to both normal functional movement as well as dysfunction of the neuromusculoskeletal system in order to effectively examine, evaluate and provide interventions for their clients in a clinical practice setting. This course is organized to build upon the knowledge students acquired in BIO 639 Human Gross Anatomy through a region by region detailed analysis of specific anatomic structures and their function as related to clinical physical therapy practice. Basic mechanics, biomechanics, kinematics, kinetics and functional anatomy of the spine and its related structures as well as the extremities will be examined. This course includes lecture experiences.

PT 512L Functional Anatomy Lab (1)
This is the laboratory component of PT 512. The contemporary physical therapist requires advanced skills for the palpation and identification of specific anatomic structures related to the examination, evaluation and application of interventions for the clinical management of clients with neuromusculoskeletal dysfunction. This course is designed to build upon knowledge acquired in BIO 639 Human Gross Anatomy by further developing the students' ability to perform both superficial and deep palpation of selected anatomic structures related to clinical practice in physical therapy. Students are also introduced to basic neuromusculoskeletal examination procedures and their clinical application and interpretation as related to functional anatomy and normal human movement and structure. This course is presented in laboratory format.

PT 513 Patient/Client Management in Orthopedic Physical Therapy I (2)
The course is designed to develop student skills in the areas of musculoskeletal examination, evaluation and intervention for patients with dysfunction of the spine and/or its related structures. Competencies to be acquired include the ability to effectively: Identify physical examination procedures related to various spinal abnormalities; Evaluate examination findings in order to appropriate categorize patients into movement based classification systems and when necessary identify a pathoanatomic diagnosis; Develop a comprehensive plan of care for client management based on, patient intervention strategies presented will include but are not limited to instruction in techniques for patient education, referral/ consultation, manual therapy (thrust and non-thrust manipulation, soft tissue manipulation, muscle energy techniques), exercise prescription, spinal traction, and indications for use of modalities/ physical agents. An understanding of the functional anatomy of spinal structures will be emphasized as they relate to patient management in orthopedics.

PT 513L Patient/Client Management in Orthopedic Physical Therapy I Lab (2)
This course presents examination, evaluation and intervention strategies for management of clients presenting with musculoskeletal dysfunction of the spine and its related structures. The emphasis of this laboratory is on the development of clinical hands on skills for the effective and efficient performance of client examination, evaluation and interventional strategies as well as the synthesis of examination findings in the implementation of a plan of care. Lab experiences include skill development in specialized manual orthopedic approaches (thrust and non-thrust manipulation), therapeutic exercise, patient case management, and problem solving techniques founded on evidence based practice. An emphasis is placed on case-based instruction.

PT 514 Integumentary Examination and Intervention for Physical Therapists (2)
This course will provide an in depth examination of the integumentary system including wound healing and risk factors associated with pathology to the integumentary system. Physical therapy examination techniques and interventions are included.

PT 515 Professional Development I (1)
This course examines the development of effective communication skills that are essential for effective patient/practitioner interaction. Along with verbal and non-verbal skills, this course facilitates self-awareness, multicultural awareness, and awareness of current professional issues as they apply to PT practice, the management of health care, and medicolegal concerns.

PT 518 Biomechanics and Functional Kinesiology for the Physical Therapist (2)
This is the didactic portion of PT 518. The contemporary physical therapist plays a major role in prevention, evaluation and clinical management of motion dysfunctions associated with developmental disorders and other forms of pathology. Students require a comprehensive understanding of basic biomechanical and kinesiological principles as a foundation for analytical investigation of movement-related conditions. Fundamental concepts are progressively integrated with and applied to total body function through laboratory analysis of human posture and complex body motions. Included in this course will be an overview to the science of human movement study. Basic mechanics, biomechanics, kinematics and kinetics will be examined. Kinesiology of normal joints, posture, head, neck and trunk movement will be emphasized. The normal kinesiological aspects of specific joints and movement patterns will be analyzed. Included will be a detailed examination of normal human walking gait as well as pathological gait patterns. This course includes lecture experiences.

PT 518L Biomechanics and Functional Kinesiology for the Physical Therapist Lab (1)
This is the laboratory portion of PT 518, The contemporary physical therapist plays a major role in prevention, evaluation and clinical management of motion dysfunctions associated with developmental disorders and other forms of pathology. Students require a comprehensive understanding of basic biomechanical and kinesiological principles as a foundation for analytical investigation of movement-related conditions. The course is organized to illustrate general principles of structure and function that can be applied in subsequent study of individual joint complexes. Fundamental concepts are progressively integrated with and applied to total body function through laboratory analysis of human posture and complex body motions. Included in this course will be an overview to the science of human movement study. Basic mechanics, biomechanics, kinematics, kinetics and functional anatomy will

be examined. Kinesiology of normal joints, posture, head, neck and trunk movements will be emphasized. Both normal and pathological movement patterns will be analyzed. Included will be a detailed examination of normal human walking gait as well as pathological gait patterns. This course utilizes experiences.

PT 547 Pharmacology for Rehabilitation Specialists (1)
This course explores trends in pharmacological management of acute and chronic conditions related to rehabilitative sciences including physical therapy, occupational therapy, speech therapy and related disciplines. Content addresses action, interactions, precautions and side effects of drug interventions in the rehabilitative management of patient/ clients.

PT 550 Clinical Neuroscience (5)
An in depth study of the neuroscience of the central and peripheral nervous systems. Clinical conditions and case studies in neurology will be utilized. Laboratory includes examination of neural specimens. Four lecture hours and three laboratory hours.

PT 552 Patient/Client Management in Cardiopulmonary Physical Therapy (2)
This course covers principles and techniques of cardiac and pulmonary intervention. Laboratory experience includes cardiopulmonary assessment, exercise testing and prescription.

PT 552S Patient/Client Management in Cardiopulmonary Physical Therapy (0)
Students work in small groups to address questions addressing prepared cases integrating the areas of cardiopulmonary and neuromuscular physical therapy. Expert clinicians review student responses and offer feedback and comment via web-based communication. Note: This course offering is in modular form delivered as distance learning in conjunction with PT 552 Lecture.

PT 552L Patient/Client Management in Cardiopulmonary Physical Therapy Lab (1)
This course includes principles and techniques of cardiac and pulmonary intervention. Laboratory experience includes cardiopulmonary assessment, exercise testing.

PT 574 Clinical Fieldwork I (3)
This is the first full-time clinical fieldwork. Its purpose is to provide the student with the opportunity to integrate and apply academic knowledge and clinical skills in a fieldwork experience. Students are provided a supervised clinical experience requiring case management through problem evaluation, goal setting, and therapeutic intervention. The preferred setting is a general hospital or rehabilitation setting that provides a continuum of patient care - (6 weeks, full time fieldwork).

PT 602 Neurodevelopmental Physical Therapy in Pediatrics (2)
This course provides the foundation for physical therapy examination and treatment of individuals with emphasis on neurodevelopment and developmental disabilities in the pediatric population. This course explores the examination, evaluation and intervention strategies for the patient with movement dysfunction as a result of neurodevelopmental pathology. Concepts include: family dynamics, multi-setting interventions, advocacy and consultation. Identification of environmental risks will be explored.

PT 602L Neurodevelopmental Physical Therapy in Pediatrics Lab (1)
This laboratory section provides the foundation for performance of the physical therapy examination and treatment of individuals with emphasis on neurodevelopmental and other chronic disabling conditions in a pediatric population. This lab will encompass examination, evaluation, and intervention for the patient with neurodevelopmental system pathology. Laboratory experiences include skill development in specialized techniques, patient case management and problem solving techniques.

PT 604 Clinical Orientation Seminar III (0)
This seminar covers the administration of the clinical portion of the PT curriculum. The class will have the opportunity to ask questions and discuss the clinical experience and the Clinical Performance Instrument (CPI) as well as the new CPI web-based tool that is used as the evaluation tool by their clinical instructors. The development of the clinical instructor is introduced. Selection of the third clinical fieldwork placement (PT 675) will occur. Clinical professional preparation for the fieldwork experiences (PT 674 and 675) will also be included in this administrative course.

PT 606 Neuromuscular Assessment and Intervention in the Adult Population (2)
This course provides the foundation for physical therapy examination and treatment of individuals with emphasis on neuromuscular and other chronic disabling conditions in an adult population. This course explores the examination, evaluation, and intervention strategies for the patient with movement dysfunction as a result of neuromuscular system pathology. Concepts include the following: theory and evidence based intervention strategies, patient education, multi-disciplinary care, family dynamics, multi-setting interventions, and consultation.

PT 606L Neuromuscular Assessment and Intervention in the Adult Population Lab (1)
This laboratory section provides the foundation for performance of the physical therapy examination and treatment of individuals with emphasis on neuromuscular and other chronic disabling conditions in an adult population. This lab will encompass examination, evaluation, and intervention for the patient with neuromuscular system pathology. Laboratory experience includes cranial nerve testing, neuromuscular therapeutic handling techniques, and therapeutic exercise prescription for a neurologic patient population.

PT 613 Patient/Client Management in Orthopedic Physical Therapy II (2)
The course is designed to develop student skills in the areas of musculoskeletal examination, evaluation and intervention for patients with dysfunction of the extremities and their related structures. Competencies to be acquired include the ability to effectively plan all components of the physical examination, evaluate examination findings, develop a functional and medical diagnosis when appropriate, and identify appropriate interventions necessary to address patient impairments, functional limitations and disabilities. Intervention strategies presented will include manual therapy, exercise prescription, and modalities/ physical agents. An understanding of the functional anatomy of peripheral structures will be emphasized as they relate to patient management in orthopedics.

PT 613L Patient/Client Management in Orthopedic Physical Therapy II Lab (2)
This course is designed to develop student skills in the areas of clinical examination/ evaluation and intervention for the comprehensive management of individuals with musculoskeletal dysfunction related to pain syndromes, post-

operative diagnoses, and degenerative processes. Lab experiences include instruction in problem solving strategies and hands-on assessment and treatment techniques as well as the development and implementation of specific exercise programs.

PT 614 Health and Wellness Promotion in Physical Therapy (3)
The course will cover concepts of prevention, health, wellness, health promotion and education in physical therapy practice. Analysis of personal health behaviors and the role of physical therapists in promotion and planning of personal and community health programs, and population health initiatives will also be included. Content includes models of health promotion, health beliefs, needs assessment, health screening, and community health planning/ implementation/evaluation. Application of prevention and wellness strategies within the scope of physical therapy practice is explored. Goals of the World Health Organization and Health People 2020 will be examined as they related to health and wellness, particularly physical activity and nutrition.

PT 615 Professional Development II (1)
This course builds on knowledge and development of effective clinical communication skills that were established in PT 515. Along with advancement of clinical verbal and non-verbal skills development, this course facilitates increased awareness and sensitivity of multicultural issues as well as discussion of how current professional issues influence PT practice, delivery and management of health care. Prerequisite: PT 515

PT 618 Patient/Client Management in Rehabilitation Physical Therapy (3)
This course discusses the physical therapy patient/client management of adult individuals with neuromuscular disorders throughout the continuum of care. Related pathologies include peripheral vascular disease, amputations, rheumatoid arthritis, post-polio syndrome, vestibular dysfunction, spinal cord injury, and chronic progressive disorders of the nervous system and integumentary system. PT intervention/prescription of prosthetic/orthotic devices for adults will also be examined. Emphasis will be placed on the PT roles of educator, advocate and consultant in various rehabilitation settings including subacute/long-term care and the home. Case management topics include rehabilitation of clients with multiple medical, cognitive and/ or social problems, and long-term management of selected neuromuscular and integumentary disorders.

PT 618L Patient/Client Management in Rehabilitation Physical Therapy Lab (2)
This course allows application of the physical therapy patient/client management of adult individuals with neuromuscular disorders throughout the continuum of care. Related pathologies include, peripheral vascular disease, amputations, rheumatoid arthritis, postpolio syndrome, and spinal cord injury and chronic progressive disorders of the nervous system and integumentary system. Emphasis is placed on developing and implementing examinations and treatment interventions appropriate to PT management.

PT 627 Applications of Research Methods in Physical Therapy (4)
This course prepares students to critically analyze and apply theory and scientific evidence to clinical practice. Students synthesize related theory and published research to present a rationale for evidence-based physical therapist practice. Course activities include lectures and seminars (both small group and computer-based) in which students pose clinically relevant research questions, conduct a systematic literature review and perform critical analysis of research studies. Introduction to ethical issues and protection of human subjects as part of research will be discussed. Students will prepare a mock IRB submission for a hypothetical study based on a clinically relevant research question. Students are also introduced to professional literature addressing economic analysis of outcomes. Format: lecture and seminar. Program required course. (2 lecture hrs. and 2 seminar/computer lab hours)

PT 674 Clinical Fieldwork II (4)
This is the second full-time clinical fieldwork. Its purpose is to provide the student with the opportunity to integrate and apply academic knowledge and clinical skills in a fieldwork experience. Students are provided a supervised clinical experience requiring case management through problem evaluation, goal setting, and therapeutic intervention. The preferred setting is a facility that provides a continuum of patient care in differing venues.

PT 701 Clinical Decision Making in Therapeutic Exercise (2) The course will develop the theoretical basis and clinical application of therapeutic exercise commonly used by physical therapists. Specific course content will include indications, precautions and contraindications and principles and procedures for applying various types of therapeutic exercise interventions. Clinical reasoning, evidence based practice, and independent learning will be fostered through traditional lectures, group discussions and group presentations. Students will be required to apply and integrate knowledge learned from any preceding physical therapy coursework and clinical fieldwork experiences. Critical analysis of clinical scenarios will be incorporated into course.

PT 701L Clinical Decision Making in Therapeutic Exercise –Laboratory Course (1)
The course is the lab component of PT 701 which will offer clinical application of therapeutic exercise commonly used by physical therapists. Specific course content will include indications, precautions and contraindications and principles and procedures for applying various types of therapeutic exercise interventions. Clinical reasoning, evidence based practice, and independent learning will be fostered through lab, seminar and group discussions. Students will be required to apply and integrate knowledge learned from any preceding physical therapy coursework and clinical fieldwork experiences. Critical analysis of clinical scenarios will be incorporated into course.

PT 703 Client Education, Advocacy and Consultation (3)
This seminar course is designed to advance client educator skills and explore advocacy and consultative roles within the context of rehabilitative science. Once students have knowledge of the applied theory and concepts related to these roles, they present and peer-review applications of this knowledge. Format: hybrid – on campus seminars and community based activities.

PT 706 Business Management Strategies for Physical Therapists (3)
This course was designed to introduce relevant health care business management concepts and tools along with understanding the most current issues which will help propel our profession into a leader in the health care industry. This course will meet for 15 clock hours in addition to the internet portion of the class.

PT 748 Differential Diagnosis (3)
The content of this course is designed to prepare both physical therapy students and practicing physical therapists to function as primary care providers within the field of physical therapy. Participants in this course will learn to identify key indicators of systemic pathology in order to assist in the development of a differential diagnosis and thus identify the necessity of direct physical therapy intervention or the need for referral to other health care providers. Participants will also be introduced to the basic skills necessary to identify the indications for radiographic and hematological testing as well as the clinical interpretation of data obtained from these tests.