

Affiliation Agreement

3 + 3 Agreement

between

Doctor of Physical Therapy Program, College of Health Professions

at

SUNY Upstate Medical University

and

SUNY College of Environmental Science and Forestry

April 2004

This agreement establishes procedures to promote the easy transition of qualified transfer students from SUNY College of Environmental Science and Forestry (ESF) to the 3 + 3 Doctor of Physical Therapy (DPT) Program in the College of Health Professions at SUNY Upstate Medical University (Upstate).

Objectives of this Agreement:

- To promote the easy transition of qualified students from SUNY College of Environmental Science and Forestry to the 3+3 Doctor of Physical Therapy (DPT) Program at Upstate Medical University. The 3+3 DPT Program will require 3 years of study (seven semesters) at ESF and 3 years of study at Upstate. Upon successful completion of three years at ESF and the first year at Upstate, ESF students will be eligible to receive a Bachelor's degree from SUNY College of Environmental Science and Forestry. Upon successful completion of three years at Upstate in the Entry level DPT program, students will be awarded a DPT degree from SUNY Upstate Medical University.
- To provide specific information for transfer students who wish to pursue a DPT Degree at SUNY Upstate Medical University.
- To attract qualified students to SUNY College of Environmental Science and Forestry and SUNY Upstate Medical University.
- To encourage academic coordination and faculty/administrative interaction, including curricular exchanges between SUNY College of Environmental Science and Forestry and SUNY Upstate Medical University.
- To exchange outcome information on the 3 + 3 DPT program.

Terms of the Agreement:

High School Seniors may apply to the Early Admission Program at SUNY Upstate at the same time that they apply to SUNY ESF. The decision to admit to SUNY Upstate Medical University will be at the sole discretion of the appropriate admissions committee in the College of Health Professions at SUNY Upstate. The decision to admit to SUNY College of Environmental Science and Forestry will be at the sole discretion of SUNY College of Environmental Science and Forestry.

High School Seniors who are accepted to the 3+3 DPT Program by both ESF and Upstate will be guaranteed acceptance to the 3+3 program at both institutions providing they meet all conditions of their acceptance as required by each individual college.

High School Students accepted by ESF only, may pursue application to the 3+3 DPT program and apply to Upstate at any point during their first three years of college.

Students accepted under the Early Admission program will be guaranteed 1st year graduate status upon completion of their third year of study at ESF providing they have satisfied all degree requirements for ESF and have completed all prerequisite courses required by Upstate for the DPT program of study as outlined in this agreement and in their letter of acceptance to Upstate.

SUNY ESF students may apply to the Upstate DPT Program at any time after matriculating at ESF. (i.e. as College freshmen, sophomores, or juniors). ESF students accepted to the 3+3 DPT program with Upstate must complete all courses required to meet degree requirements at ESF as well as all prerequisite courses for the DPT program as outlined in this agreement and in their letter of acceptance. ESF students who wish to pursue the 3+3 DPT Program must submit a DPT application to SUNY Upstate. Qualified students will be interviewed by the Upstate Department of Physical Therapy faculty and notified of their admissions status within four weeks of their interview.

Conditions of Acceptance by Upstate are as follows:

- Students will be required to maintain a 3.3 GPA (a minimum of a B in each science course is recommended).
- GREs are waived for students accepted under the Early Admission Program for the 3+3 DPT.
- All science pre-requisite courses must include laboratories
- Courses with grades of "C-" or better are acceptable for transfer credit.
- ESF agrees to accept the first year of academic study in the DPT Program at Upstate as the final year of study at ESF and will grant a Bachelors Degree upon successful completion (at least a 2.0 GPA) of the first year of study at Upstate.
- Students will spend three years at ESF and three years (9 semesters) in the DPT Program at Upstate.
- ESF agrees that a student accepted by Upstate will pay DPT tuition to Upstate for the fourth year and all subsequent years of study at Upstate.

Administration of Financial Aid

For the purpose of administering Federal and State student financial aid, *SUNY ESF* will be the home institution for the first three years of the program. SUNY Upstate Medical University will assume responsibility as the home institution for the second three-year period, once the student has matriculated at Upstate. Students at Upstate are considered to be enrolled at the graduate/professional level. Financial aid eligibility at Upstate is based on graduate/professional enrollment, even though the individual student may not yet have earned a Bachelor's degree.

Admission Criteria for the 3+3 Program

Early Admission for high school seniors to Upstate is subject to the applicant meeting the following criteria:

- SAT Minimum score of 1100
- High School Grade Point Average 90% or higher
- High School Rank-top 20% of class
- Three Years of Science and Math at the regents or honors level
- Appropriate letter of recommendation from a Physical Therapist (if available)
- Demonstrated desire to become a Physical Therapist

Early Admission for college students is subject to the applicant meeting the following criteria:

- College GPA of 3.3 or higher
- College Science GPA of 3.3 or higher
- Appropriate letter of recommendation from a Physical Therapist
- Demonstrated desire to become a Physical Therapist

All students should apply to Upstate by January 1st of their year of entry.

Review/Revision of the Agreement

Any changes in the courses or programs at either institution will lead to discussion between the appropriate faculty and administrators at both institutions. At the request of either party, a review of the 3 + 3 Agreement will be conducted by both institutions.

Assistance Agreement

SUNY College of Environmental Science and Forestry and SUNY Upstate Medical University agree to encourage qualified students to participate in this program by providing advisement, information, and assistance to prospective transfer students.

The Admissions Office at ESF will forward to the Admissions Office at Upstate, a list of students accepted at ESF during their senior year of high school who have indicated their intent to apply for enrollment in the 3 + 3 DPT program. This will enable Upstate to communicate with interested students. In turn, the Upstate Admissions Office will forward a copy of the acceptance letter and conditions of acceptance to the Admissions Office at ESF for all students accepted by Upstate who indicate that they will attend ESF for their first three years of study.

Course Equivalencies Agreement

Both institutions agree to maintain a current listing of the course equivalencies as they appear in the attached Course Equivalents Guide.

Upstate Pre-matriculation Requirements for the 3 + 3 DPT*

- work or volunteer experience in physical therapy (40 hours per year or 80 hours total in a minimum of two different settings)
- CPR and First Aid certification
- a minimum of 40 credit hours including: **

Anatomy and Physiology I and II	8***	Social Science	3
General Biology	4***	General Physics I & II	8***
General Chemistry I and II	8***	Psychology (Developmental recommended)	3
English (composition recommended)	3	Statistics	3

** Course equivalents are outlined on the last page of this agreement

***Science Courses must include lab

BS, DPT Degree Requirements - 3 + 3 Program

SUNY College of Environmental Science and Forestry and SUNY Upstate Medical University both agree to jointly participate in the 3 + 3 Program as outlined on the following page.

Baccalaureate Degree for the 3 + 3 Program. Students will be awarded the baccalaureate degree in Environmental Biology from ESF upon receipt of an official transcript from SUNY Upstate Medical University indicating successful completion of the first year of Upstate's curriculum with grades of C or better in each course. The first year of study at SUNY Upstate requires a total of 42 credit hours over the summer, fall and spring semesters.

Program of Study – Entry-Level Doctor of Physical Therapy Program

ESF -- Environmental Biology Component

First Year, Fall Semester

EFB 226	General Botany	4
FCH 150/151	General Chemistry I & Lab	4
APM 105	Survey of Calculus I	4
CLL 190	Writing and the Environment	3
EFB 132	Orientation Seminar: EFB	1
Total		16

First Year, Spring Semester

EFB 285	Principles of Zoology	4
FCH 152/153	General Chemistry II & Lab	4
PSY 205	Foundations of Human Behavior	3
	GenEd: American History	3
Total		14

First Year, Summer Session

EFB 202	Eco. Monitoring & Biodiversity Assess.	3
	Field Elective	3
Total		6

Second Year, Fall Semester

PHY 211/221	General Physics I & Lab	4
PSY 335	Psychology of Childhood	3
	GenEd: Western Civilization	3
	GenEd: Other World Civilizations	3
	GenEd: The Arts	3

Total

16

Second Year, Spring Semester

EFB 120	Global Environment	3
FCH 210	Elements of Organic Chemistry	4
CLL 290	Writing, Humanities and the Environment	3
PHY 212/222	General Physics II & Lab	4
Total		14

Third Year, Fall Semester

EFB 307	Principles of Genetics	3
EFB 308	Genetics Laboratory	1
EFB 320	General Ecology	4
EFB 325	Cell physiology	3
EFB 462	Animal Physiology: Environmental & Ecological	3
Total		14

Third Year, Spring Semester

APM 391	Intro to Prob & Statistics	3
EFB 311	Population Ecology & Evolution	3
EFB 385	Comparative Vertebrate Anatomy	4
EFB 563	Animal Physiology Laboratory	1
	Elective	3
Total		15

Biology Elective Distribution Requirements

To ensure that Environmental Biology undergraduates obtain both strength and breadth of knowledge, they must earn 25 elective credit hours in upper division biology courses, which must include:

- A. Field Experience Elective – three credit requirement met during first year, summer session
- B. Structure and Function – three credit hour requirement met through completion of EFB 385
- C. Organismal Diversity courses – nine credit hours completed through completion of first year of physical therapy program

SUNY ESF Course Descriptions

APM 105 Survey of Calculus and its Applications I (4 credit hours) Three hours of lecture and one hour of recitation. Introduction to calculus for students in the life and management sciences. Elements of analytic geometry. An emphasis on the concepts of limits, continuity and differentiation for algebraic, trigonometric, exponential and logarithmic functions and their application to life and management sciences. Fall.

Prerequisite: Precalculus or 3.5 years of high school mathematics.

APM 391 Introduction to Probability and Statistics (3 credit hours) Elementary probability including permutations, combinations and other counting formulae; and basic statistical inference, including point estimation, confidence intervals and hypothesis testing for one or two population means or proportions. Fall or Spring.

CLL 190 Writing and the Environment (3 credit hours) Introduction to writing and reading on the college level. The course will require frequent informal writing assignments, an oral presentation and at least two formal writing assignments. Students will acquire the skills to achieve college-level literacy. Fall.

CLL 290 Writing, Humanities, and the Environment (3 credit hours) Three hours of discussion and group work. Intended for students who have had an introductory writing course. Students will examine the views of nature and the environment as they are expressed by selected writers, poets and essayists. Frequent informal and formal writing assignments, research and documentation, and an oral presentation are required. With an emphasis on critical writing, critical thinking and critical reading, students will learn the literacy expectations of their disciplines. Spring. Prerequisite: CLL 190.

EFB 120 Global Environment (3 credit hours) Three lectures per week. A survey of current global environmental change, including global warming, acidic deposition, the ozone hole, El Nino, loss of biodiversity, and energy and population problems. Socio-economic and political ramifications of global change. Spring.

EFB 132 Orientation Seminar: Environmental and Forest Biology (1 credit hour) One hour of lecture, discussion and/or exercises. Introduction to campus resources available to ensure academic success. Introduction to EFB as a field of inquiry. Fall.

EFB 202 Ecological Monitoring and Biodiversity Assessment (3 credit hours) Forty-five hours of lecture, laboratory and field instruction per week for three weeks. An introduction to the biodiversity of northeastern North American terrestrial, wetland, and aquatic communities with a focus on vascular plants and invertebrate and vertebrate animals. Incorporates practical field exercises designed to acquaint the student with problem solving. Summer, Cranberry Lake Biological Station.

EFB 226 General Botany (4 credit hours) Three hours of lecture and three-hour laboratory. An introduction to plant biology with special emphasis on the structure and function of the green plant. Fall.

EFB 285 Principles of Zoology (4 credit hours) An introduction to the study of vertebrate and invertebrate animals, including reproduction, development, heredity, physiology, form and function, diversity, evolution, and behavior. An integrated laboratory and lecture course that introduces processes of scientific inquiry and provides a basis for understanding the natural world. The course provides the fundamental background for advanced or specialized courses, e.g., in animal physiology, anatomy, taxonomy, ecology, behavior, and fisheries/wildlife sciences. Spring.

EFB 307 Principles of Genetics (3 credit hours) Three hours of lecture and discussion. A general course covering concepts of genetics and evolution basic to upper-division biology and biochemistry courses. Includes the inheritance and analysis of Mendelian and quantitative traits, the chemical nature of the gene and its action, genetic engineering, the genetic structure of populations and their evolution. Numerical methods for characterizing and analyzing genetic data are introduced. Fall.

EFB 308 Principles of Genetics Laboratory (1 credit hour) Three hours of auto-tutorial laboratory. Experiments with plants and animals and computer simulation exercises demonstrate the basic principles of inheritance of Mendelian traits and changes in populations caused by major forces in evolution or by breeding procedures. Numerical methods for characterizing quantitative traits and for testing hypotheses are introduced. Fall. Co-requisite: EFB 307.

EFB 311 Population Ecology and Evolution (3 credit hours) Three hours of lecture/discussion. The ecological and evolutionary processes that affect natural populations are introduced. Among the topics are demography, population growth and dispersal, competition, predation, genetic

variation, heritability, natural selection and adaptation.
Spring. Pre- or co-requisite(s): EFB 307, EFB 320.

EFB 320 General Ecology (4 credit hours) Three hours of lecture and one three-hour field trip/laboratory. An introduction to plant and animal ecology, including concepts and techniques in population ecology, community dynamics, physiological and behavioral ecology, biogeography, ecosystem ecology, nutrient cycling and energy flow. Ecological management applications, human ecological impacts and problems are considered. Fall.

EFB 325 Cell Physiology (3 credit hours) Three hours of lecture. Introduction to the dynamics of living systems with emphasis on the universality of the biological world. Fall.
Prerequisite: One semester of organic chemistry.

EFB 385 Comparative Vertebrate Anatomy (4 credit hours) Three hours of lecture and three hours of laboratory. Analysis of vertebrate structure, with emphasis on comparative study of organ systems. Includes evolution of form and function, major adaptive patterns and phylogenetic relationships in vertebrates. Spring.

EFB 462 Animal Physiology: Environmental and Ecological (3 credit hours) Three hours of lecture, discussion and/or exercises. An introduction to the physiology of adaptation to the physical and biotic environments, including animal energetics, biology of body size and physiological constraints on animal life history. Spring.

EFB 563 Animal Physiology Laboratory (1 credit hour) Three hours of laboratory. Students will be introduced to the experimental foundations of organismal and ecological physiology of animals. Emphasis is on loosely guided student-designed experiments, carried out from conception to result. Spring.
Prerequisites: EFB 462 or EFB 662, or equivalents, and permission of instructor.

FCH 150 General Chemistry I (3 credit hours) Three hours of lecture. This first semester general chemistry course is organized around the physical and chemical properties of matter. It introduces the atomic structure of elements, the kinds of bonds in chemical compounds, how atomic ratios in molecules form the basis for the stoichiometry of reactions, thermodynamics and discusses the principles of chemical reactivity. Fall.

FCH 151 General Chemistry Laboratory I (1 credit hour) Three hours of laboratory. Basic laboratory techniques will be emphasized through experiments dealing with: the density of solids and liquids, atomic ratios and mass combining ratios, atomic structure and the periodic table, calorimetry, chemical reactivity, geometric structure of molecules, formation of coordination compounds, and paper chromatography. Fall.
Prerequisite: FCH 150.

FCH 152 General Chemistry II (3 credit hours) Three hours of lecture. The second course in general chemistry continues the development of chemical reactivity

by focusing on chemical kinetics and chemical equilibrium. Aqueous phase processes are emphasized and are applied to precipitation and solubility equilibria, acid/base dissociation phenomena, and fundamental electrochemical reactions. Spring.
Prerequisite: FCH 150.

FCH 153 General Chemistry Laboratory II (1 credit hour) Three hours of laboratory. Concepts of chemical kinetics and equilibrium processes will be reinforced through experiments in: titrimetric analyses, determinations of K_a and K_{sp} values, investigation of rate constants and reaction orders, buffer preparations, oxidation/reduction reactions and qualitative analyses. Spring.
Prerequisites: FCH 150, FCH 151.
Co-requisite: FCH 152.

FCH 210 Elements of Organic Chemistry (4 credit hours) Three hours of lecture and four hours of laboratory including pre-laboratory instruction. Nomenclature, preparation, and important reactions of functional groups and classes of organic compounds including examples relevant to biology. Isomerism and stereochemistry topics of biomolecules. Quantitative study of weak acids and weak bases. Lab techniques include compound manipulations, extractions, distillations, chromatography, synthesis, and calculation of yields. Spring.
Prerequisite: One year of General Chemistry.

FOR 202 Introduction to Sociology (3 credit hours) Three hours of lecture or discussion. General introductory principles and methods of sociology including group dynamics and development, different structural arrangement of social groups, community development and adjustment processes, relationships with the natural environment.

PHY 211 General Physics I (3 credit hours) First half of a two-semester introduction to classical physics including mechanics and thermal physics. Uses calculus. Knowledge of plane trigonometry required. Spring. Coreq: PHY 221, MAT 285, or MAT 295

PHY 212 General Physics II (3 credit hours) Second half of a two-semester introduction to classical physics including electricity, magnetism and light. Prereq: PHY 211, 221. Coreq: PHY 222, MAT 286, or MAT 296.

PHY 221 General Physics Laboratory I (1 credit hour) Techniques of laboratory work: treatment of random errors, graphical representation of data. Experimental demonstration of principles of mechanics, thermodynamics, and waves (of vector forces, conservation of momentum and energy, thermal properties of gases). Spring. Coreq: PHY 211.

PHY 222 General Physics Laboratory II (1 credit hour) Experimental study of principles of electromagnetism and their application in electrical circuits. Use of electrical instruments, such as the oscilloscope. Coreq: PHY 212.

PSY 205 Foundations of Human Behavior (3 credit hours) Fundamental principles of mental life and human behavior. Significance of psychology in human relationships and self-understanding.

Doctorate of Physical Therapy. Students will be awarded the Doctor of Physical Therapy degree by Upstate after

successfully completing the complete three-year program of study as outlined below.

Summer Session		Credit Hours
PHYT 601	Gross Anatomy	6
PHYT 602	Professional Behaviors	3
Total		9

Fall Semester		Credit Hours
PHYT 611	Bioscience I	5
PHYT 625	Movement Analysis & Patient/Client Management I	4
PHYT 615	Interventions I	3
PHYT 621	Foundations of Patient/Client Management	3
PHYT 603	Foundations of Scientific Inquiry	1
Total		16

Spring Semester		Credit Hours
PHYT 612	Bioscience II	2
PHYT 604	Differential Diagnosis in Physical Therapy	3
PHYT 626	Movement Analysis & Patient/Client Management II	4
PHYT 616	Interventions II	2
PHYT 605	Neuroscience	6
Total		17

Completion of these three terms (42 credit hours) meets the final upper-division BS degree requirements for ESF.

Summer Session		Credit Hours
PHYT 641	Teaching & Learning In PT	2
PHYT 631	Patient/Client Management: Adult Neurological Disorders	3
PHYT 642	Research Methods	2
PHYT 632	Patient/Client Management: The Spine	1
Total		8

Fall Semester		Credit Hours
PHYT 661	Clinical Experience I	8
PHYT 633	Patient/Client Management: Acquired Conditions	3
PHYT 643	Critical Inquiry	1
Total		12

Spring Semester		Credit Hours
PHYT 644	Physiology of Exercise	2
PHYT 617	Interventions III	3
PHYT 634	Patient/Client Management: Developmental Disabilities	3

PHYT 647	Psychosocial Aspects of Patient Care	2
PHYT 646	Special Topics in Orthopedics	2
PHYT 648	Imaging	2
	Elective	1-3
Total		14-17

Summer Session		Credit Hours
PHYT 662	Clinical Experience II	8
PHYT 650	Integumentary Management	1
	Elective	1-3
Total		9-12

Fall Semester		Credit Hours
PHYT 651	Applied Clinical Decision Making	2
PHYT 652	Management Principles	3
PHYT 653	Medical Ethics for Physical Therapists	3
PHYT 654	Gerontology for Physical Therapists	2
PHYT 635	Patient/Client Management: Cardiovascular & Pulmonary Disorders	3
	Elective	1-3
Total		13-16

Spring Semester		Credit Hours
PHYT 663	Clinical Experience III	12
PHYT 664	Clinical Experience IV	12
Total		24

SUNY Upstate Course Descriptions

PHYT 601 Gross Anatomy (6 credit hours) - This course utilizes a regional approach to the study of human anatomy. Cadaver dissection in the laboratory is supplemented by lectures, clinical correlation presentations, and audiovisual aids. Clinical correlations use a problem based format. Prerequisite: Physical Therapy Matriculation.

PHYT 602 Professional Behaviors (3 credit hours) - This course is framed around the generic abilities and development of professional behaviors. The principles and foundational elements necessary for practicing in the professional realm of physical therapy and in the health care environment are reviewed. Issues relating to standards of practice, ethical and legal considerations, communication, time and resource management, stress management in relation to health and wellness, professionalism, and interpersonal and professional relationships are covered. Self-reflection and portfolio development are integral to the course. Prerequisite: Physical Therapy Matriculation.

PHYT 611 Bioscience I (5 credit hours) - Using a systems approach, this course emphasizes the integration of histology, physiology, pathology, and pharmacology as these disciplines apply to the human body across the life span. In conjunction with information already obtained in Gross Anatomy, the relationship between structure and function of healthy body systems is investigated. The impact of common pathologies, and the pharmacological interventions used to treat those pathologies, on physical therapy practice are subsequently analyzed. Units of study include normal and abnormal structure and function of cells and tissue types, neural, endocrine, immune, muscle, circulatory, lymphatic and respiratory systems. Prerequisite: Gross Anatomy.

PHYT 625 Movement Analysis & Patient/Client Management I (4 credit hours) - This course introduces and integrates basic kinesiological/biomechanical principles related to the normal function/movement of the cervical spine and upper quarter with the basic principles of patient/client management of common conditions of the cervical region and upper extremity across the life span. The use of tests and measures associated with abnormal movement/function of the cervical spine and upper extremity, particularly those for joint integrity and mobility, muscle performance, range of motion, and pain are covered. Principles of diagnosis and the determination of the associated anatomical structure or musculoskeletal pathology are also introduced, as is the medical management for selected upper extremity conditions. Intervention rationale includes evidence-based practice. Clinical experiences are integrated into this course. Prerequisites: Gross Anatomy and Professional Behaviors.

PHYT 615 Interventions I (3 credit hours) - This course introduces students to foundational physical therapy interventions throughout the life span, including health and

wellness promotion. The principles of safe patient management including positioning, bed mobility, transfer assistive devices, infection control and medical equipment considerations are reviewed. Units on fitness, exercise application of wellness principles, soft tissue technique and therapeutic massage are covered. Clinical experiences are integrated into this course. Prerequisites: Gross anatomy and Professional Behaviors.

PHYT 621 Foundations of Patient/Client Management (3 credit hours) - This course introduces students to foundational concepts that serve as a framework for the process of examination and evaluation of patients/clients across all ages, diagnoses and practice settings. A holistic approach is utilized, emphasizing the concept of function as it relates to the practice of physical therapy. Health risks, screening and assessment are reviewed. Topics include the disablement model, chart review and history taking, functional tests, use of evidence-based practice, wellness and health promotion documentation and the Guide to PT Practice. Clinical experiences are integrated into this course. Prerequisite: Gross Anatomy.

PHYT 603 Foundations of Scientific Inquiry (1 credit hour) - This course introduces the framework for evidence-based practice and outcomes assessment. Prerequisite: Physical Therapy Matriculation.

PHYT 612 Bioscience II (2 credit hours) - This course is a continuation of Bioscience I. Using a systems approach, this course emphasizes the integration of histology, physiology, pathology, and pharmacology as these disciplines apply to the human body across the life span. Units of study include the study of normal and abnormal structure and function of skeletal, integumentary, gastrointestinal, and genitourinary systems. Prerequisite: Bioscience I.

PHYT 604 Differential Diagnosis in Physical Therapy (3 credit hours) - This course presents theories and concepts of clinical decision making and diagnosis reviews a variety of systemic conditions across the life span with an emphasis placed on areas most pertinent to physical therapy. The clinical manifestations, screening examination(s), therapeutic management and relevant physical therapy practice are addressed. Relevant laboratory values and diagnostic tests are included. Focus is placed on differential diagnosis of systemic disorders that mimic musculoskeletal dysfunction. Through lecture, discussion, review of the literature, case studies and clinical decision making, students gain an understanding of how various diseases impact all areas of patient/client management. Clinical experiences are integrated into course. Prerequisites: Successful completion of all first year fall semester courses.

PHYT 626 Movement Analysis & Patient/Client Management II (4 credit hours) - This course integrates kinesiological/biomechanical principles related to the normal function/movement of the spine and lower quarter, including posture and gait, with the basic principles of patient/client management of spinal and lower extremity conditions across the life span. The use of tests and measurements associated with abnormal movement/function of the lower extremity, particularly those for joint integrity and mobility, muscle performance, range of motion, pain, posture, gait and locomotion are covered. Diagnosis and the determination of the associated anatomical structure or musculoskeletal pathology of the lower quarter is also be covered, as is the medical management of selected lower extremity conditions. Intervention rationale includes the use of evidence-based practice. Clinical experiences are integrated into this course. Prerequisites: Successful completion of all first year fall semester courses.

PHYT 617 Interventions II (2 credit hours) - This course reviews the biophysical principles, physiological implications, indications and contraindications underlying various physical agents, electrotherapeutic procedures and devices, and the operation of these modalities. Intervention rationale includes the use of evidence-based practice. Clinical experiences are integrated into this course. Prerequisites: Successful completion of all first year, fall semester courses.

PHYT 605 Neuroscience (6 credit hours) - This course presents an integrated approach to the general organization and function of the human nervous system and includes an in-depth presentation of human neurophysiology and neuroanatomy. Emphasis is placed on the sensory systems and motor control. Medical aspects of neurological conditions across the life span are integrated with basic neuroscience knowledge. This course consists of 3 integrated units (neuroanatomy, neurophysiology, and clinical neurology) delivered in two "parts" of the course. The neuroanatomy unit is delivered first and the knowledge gained from this unit is utilized extensively during presentations of the other two units during the second portion of the course. Prerequisites: Bioscience II

PHYT 641 Teaching & Learning in Physical Therapy (2 credit hours) - This course emphasizes the knowledge, skills and behaviors needed by the physical therapist to educate patients/clients, caregivers, families, professional colleagues, students and community members across the life span. Content includes application of teaching and learning theories, motivational theory, curriculum design, lesson plan development, didactic and clinical teaching techniques, methods of instruction and evaluation, and an introduction to the use of technology in education. A requirement of this course is to participate in a videotaped microteach session. Prerequisite: Professional Behaviors.

PHYT 631 Patient/Client Management: Adult Neurological Disorders (3 credit hours) - This course begins the development of skills in examination, evaluation and interventions with individuals with

neurological impairments. Content focuses on the adult patient with central nervous system dysfunction, such as head trauma, cerebral vascular accident and other neurological disorders. A problem solving approach utilizing evidence-based practice is emphasized, integrating student's previous knowledge from Neuroscience regarding normal functioning of the nervous system, as well as disorders of the nervous system. Prerequisites: Neuroscience, Movement Analysis and Patient/Client Management II, Interventions II.

PHYT 642 Research Methods (2 credit hours) - This course acquaints the student with the basic language and methods of quantitative, qualitative and epidemiologic research as they apply to the health sciences. Principles of research are introduced through lecture, readings and assignments. Students are also introduced to the statistical tools most commonly employed in health research and to the use of a computer software package to store, manipulate and analyze data. Prerequisite: Foundations of Scientific Inquiry.

PHYT 632 Patient/Client Management: The Spine (1 credit hour) - This introductory course includes demographics, classification, examination, evaluation and physical therapy diagnosis of the spine. Prerequisites: Foundations of Examination and Evaluation, Bioscience II, Movement Analysis and Patient/Client Management II.

PHYT 661 Clinical Experience I (8 credit hours) - This is the first of four full-time clinical education experiences that integrates academic course work with patient/client care. Experiences may take place outside the Syracuse area. Under the supervision of clinical faculty, students begin to develop knowledge, skills, and behavior in all elements of patient/client management as defined by the performance criteria in the Clinical Performance Instrument (CPI). Students begin to integrate evidence-based practice into clinical practice through performance of a clinical assignment. Entry-level competency in professional behaviors and in demonstration of adherence to ethical and legal practice standards is required at the end of Clinic I. Required passing scores for Clinic I are specifically defined in course objectives. Prerequisites: Successful completion of all second year summer course work.

PHYT 633 Patient/Client Management: Acquired Conditions (3 credit hours) - This course presents the theories and principles of examination, evaluation, and interventions for specific conditions across the life span. These conditions include amputation and spinal cord injury. Topics including orthotics, home and work barriers, and adaptive equipment management are reviewed. Intervention rationale includes evidence-based practice. Prerequisites: Foundations of Examination and Evaluation, Interventions I, Differential Diagnosis.

PHYT 643 Critical Inquiry (1 credit hour) - The purpose of this seminar is to apply the broad concepts of research methods, as presented in the Research Methods course, to specific clinical problems for evidence-based practice of physical therapy. The student will read, critically analyze, and summarize evidence found in physical therapy and related literature to complete a written review of literature and a research proposal. Prerequisite: Research Methods.

PHYT 644 Physiology of Exercise (2 credit hours) - Physiological responses to acute and chronic (training) exercise across the life span are examined. Principles of testing skeletal muscle function and cardiorespiratory fitness utilizing evidence-based practice are emphasized through laboratory and lecture experiences. Guidelines for exercise prescription are addressed using case examples. Prerequisites: Bioscience II, Differential Diagnosis.

PHYT 617 Interventions III (3 credit hours) - This course develops clinical skills in the operation and application of various physical agents and electrotherapeutic modalities and in advanced therapeutic exercise techniques for selected patient populations across the life span. A unit on casting and hand splint fabrication is also presented. Evidence-based practice is used to evaluate the clinical efficacy of these applications. Prerequisites: Interventions II, Movement Analysis and Patient/Client Management II, Patient Client Management: Adults with Neurological Disorders.

PHYT 634 Patient/Client Management: Developmental Disabilities (3 credit hours) - This course is a continuation of the skill development in examination, evaluation, and intervention that began in Patient/Client Management: Adults with Neurological Disorders as it applies to individuals with developmental disabilities. Theory and principles of development as they pertain to examination, evaluation, and intervention using evidence-based practice are examined. Topics for discussion include family-centered care, special concerns of various age groups and selected medical diagnoses, impact of public law on delivery of care, and clients with multiple disabilities. Prerequisites: Patient/Client Management of Adults with Neurological Disorders.

PHYT 647 Psychosocial Aspects of Patient Care (2 credit hours) - This course provides an opportunity to analyze and synthesize the psychological and sociological aspects of patient/client care. The emphasis is on self-directed learning and self knowledge. Topics include awareness of self, effective helping strategies, group dynamics, family theory, values, diversity, living with a disability, sexuality grief, death and dying. Prerequisites: Clinic I.

PHYT 646 Special Topics in Orthopedics (2 credit hours) - This course encompasses medical lecture and physical therapy intervention for a variety of orthopedic disorders across the life span. A problem based learning format utilizing evidence-based practice is used to analyze case studies

emphasizing spinal and TMJ intervention. Prerequisite Patient/Client Management: The Spine.

PHYT 648 Imaging (2 credit hours) - This course offers a description of radiology including normal compared to pathologic bone, bone embryology, and common fracture sites. Indications and implications of commonly used diagnostic imaging tests such as radiography, MRI, ultrasound, PET scans, endoscopy, CT, MRI, discograms, dexascans, and myelograms is discussed. Prerequisites: Bioscience II, Special Topics in Orthopedics.

Elective (3-9 credit hours) - Students have the opportunity to choose from a variety of electives that include special courses or experiential learning activities. Course content may include consortium courses, SUNY Upstate Medical University courses, or independent study in advanced physical therapy examination, evaluation or interventional. Experiential learning activities may include teaching experiences, research projects or in-depth, evidence-based study. Prerequisites: Physical Therapy matriculation at permission of the instructor.

PHYT 662 Clinical Experience II (8 credit hours) - This is the second of four full time clinical education experiences that integrate academic course work with patient/client care. Experiences may take place outside the Syracuse area. Under the supervision of clinical faculty, students continue to develop knowledge, skills, and behavior in all elements of patient/client management as defined by the performance criteria in the Clinical Performance Instrument (CPI). Students continue to develop evidence-based practice skills that will culminate in a presentation. Entry-level competency in the foundational elements of physical therapy practice, in professional development, in the ability to adopt delivery of care to reflect respect for and sensitivity to individual differences, and to demonstrate professional/ social responsibilities beyond those defined by work expectations is required at the end of Clinic II. Required passing scores for Clinic II in other performance criteria are specifically defined in course objectives. Prerequisites: Successful completion of all spring semester second year course work.

PHYT 650 Integumentary Management (1 credit hour) - This course presents physical therapy management of common pathological conditions of the skin across the life span encountered by physical therapists. The contributions of other health care professionals in the management of pathological conditions of the skin are identified, and strategies for prevention of skin conditions are discussed. Prerequisites: Bioscience II, Differential Diagnosis.

PHYT 651 Applied Clinical Decision Making – Case Report Methodology (2 credit hours) - This capstone course encompasses examination, evaluation, physical therapy diagnosis, prognosis, and interventions of selected conditions across the life span seen in physical therapy. A problem-based learning format, using evidence-based practice, is used to analyze case studies. Prerequisite: Clinic II.

PHYT 652 Management Principles (3 credit hours) - This course allows the student to analyze the administrative process as it relates to the practice of physical therapy in a variety of health care systems. Content includes personnel management, legislation, strategic planning, marketing, budgeting, conflict resolution, negotiating, networking, consulting and fiscal management. Learning formats consist of lectures, small group work and completion of an administrative project. Prerequisite: Clinic II.

PHYT 653 Medical Ethics for Physical Therapists (3 credit hours) - This course involves an examination of ethical theories and principles as they inform contemporary health-care dilemmas. Students learn how philosophical principles - such as autonomy, confidentiality, veracity, justice, beneficence, non-maleficence, and informed consent - create a context for exploring particular ethical topics (i.e., suicide, reproductive rights, death and dying, abortion, testing and screening, biomedical research, and professional conduct). Though dealing with practical situations, this course emphasizes critical and theoretical thinking. An oral presentation and research paper are required. Prerequisites: None

PHYT 654 Gerontology for Physical Therapists (2 credit hours) - This writing intensive course provides an in depth examination of aging as it relates to physical therapy. Concepts and principles of aging are examined in light of evidence-based practice, including the biological, psychological, social and cultural aspects of aging. Care is given to differentiate between normal biological age changes and those due to other factors such as physical inactivity, emotional responses, and disease processes. Prerequisites: Clinic II.

PHYT 635 Patient/Client Management - Cardiovascular and Pulmonary Disorders (3 credit hours) – Using a problem based learning format, this course focuses on cardiovascular fitness and the management of patient/clients with cardiovascular and pulmonary disorders across the life span. A review of normal structure and function of the cardiovascular and pulmonary systems including relevant laboratory and diagnostic tests is included. The pathophysiology of the disorders of respiratory system, heart and the circulator system is discussed in detail as it applies to patients with cardiovascular and/or pulmonary impairment. Exercise interventions and evidence-based practice are stressed. Prerequisite: Clinic II.

PHYT 663 Clinical Experience III (12 credit hours) -- This is the third of four full time clinical education experiences that integrates academic course work with patient/client care. Experiences may take place outside of the Syracuse area. Under the supervision of clinical faculty, students continue to develop knowledge skills, and behavior in all elements of patient/client management as defined by the performance criteria in the Clinical Performance Instrument (CPI). The students demonstrate entry-level performance in communication and in education of others. Required passing scores for Clinic III in other performance criteria are specifically defined in course objectives. Prerequisites: Successful completion of all fall semester third year course work.

PHYT 664 Clinical Experience IV (12 credit hours) -- This is the fourth and final full time clinical education experience that takes place under the supervision of clinical faculty. Experiences may occur outside of the Syracuse area. At the conclusion of this experience, students consistently demonstrate entry-level performance in all areas of patient/client management as defined by the Clinical Performance Instrument (CPI). Prerequisite: Clinic III.

Signature Page

Liaison and Approval

Liaison from SUNY ESF



Susan H. Sanford
Director, Admissions &
Inter-Institutional Relations

Liaison from SUNY Upstate Medical
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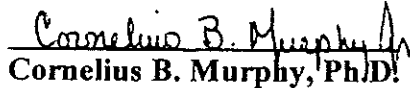
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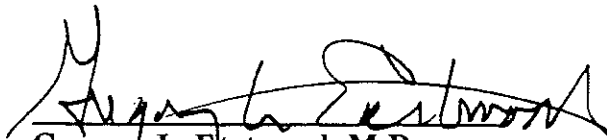
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