The Department of Physical Therapy at New York University has been a leader in physical therapy education since 1942. The professional entry-level doctoral program began in 1998.

New York University offered the first M.A. program and the first Ph.D. program in physical therapy in the United States. We continue to lead in physical therapy graduate education. Graduate programs in physical therapy leading to the M.A. or Ph.D. degree are open to physical therapists who are graduates of accredited physical therapy programs. Students have the opportunity to work with our experienced faculty in state-of-the-art research laboratories. In addition, federal- and state-level grants provide significant financial aid for qualified full-time students.
The Master of Arts degree concentration in the kinesiology of persons with disabilities prepares physical therapists for advanced practice, clinical research, and teaching. Students develop competent clinical research skills to examine control problems in individuals with physical disabilities. This 36-point concentration gives students expertise in the analysis and synthesis of human motion, measurement and evaluation of human motion, and research design and implementation. Students study both normal and abnormal human motion. Electromyography, electromyography, dynamometry, cinematography are used to illustrate the most advanced theories and techniques for measurement and evaluation of human motion. Course work and independent study enhance capacities for scientific thought and develop skills in research methodology and data analysis.

**CAREER OPPORTUNITIES**

Graduates from this program work as clinical researchers, teachers, administrators, and clinicians in a variety of settings.

**Pathokinesiology**

**Director**
Marilyn Moffat

380 Second Avenue,
4th Floor
212-998-9406

**Degree**
M.A.

**Faculty**
Ling, McDonough, Moffat, Tunik

**Adjunct Faculty**
McHugh, Nelson

**Adjunct Faculty**
Albert Accettola Jr., M.D.
Shingpui Betty Chow, M.A.; PT
Carlo Ciortoli, M.D.
Michael Cormican, M.S.; PT
Anthony County, M.S.; C.P.
Francisco Carlos Nunes Da Silva, PT
Carol R. Davis, PT
Kathy deRenzy, PT
Joan Edelstein, M.A.; PT
Elaine Espinosa, PT
Joann Ferrara, PT
Michael Fox, PT
Jacqueline Friedman, M.D.
Susan L. Garritan, Ph.D.; PT
Coleen T. Gately, PT
Benjamin Gelfand, PT
Roya Ghazinouri, PT

**McHugh, Nelson**
Adjunct Faculty

**Eugene Tunik, Assistant Professor. B.S. 1997, Northeastern; Ph.D. 2003, Rutgers; PT.**
Motor control and learning; cognition and perception; neuroscience; fMRI; TMS.

**Kevin Weaver, Clinical Assistant Professor. B.S. 1990, M.A. 1995, New York; D.P.T. 2005, Temple; PT.**
Ergonomics; biomechanics; musculoskeletal physical therapy.

**John Gianuroso, Ph.D.**
Joan T. Gold, M.D.
Carroll Anne Grece, M.P.S.; PT
Francois Haas, Ph.D.
Jeff Hoder, PT
Tom Holland, Ph.D.; PT
Vern Houston, Ph.D.
Jane Katz, Ed.D.
Norma M. Keller, M.D.
Richard Keohan, M.S.; PT
Fidelindo Lim, M.A.; R.N.
Gaetano Lombardo, M.A.; PT
Avelin A. Malyango, M.D.
Ted Marks, M.S.; PT
Georgeann McGuinness, M.D.
Allyson McGuire, PT
Malachy McHugh, Ph.D.

**Alec J. Megibow, M.D.**
Theresa Morrone, PT
Arthur Nelson, Jr., Ph.D.; PT
Laura O’Brien, M.S.; R.N.
Kate Parkin, PT
Attilio Pensavalle, D.P.T.; PT
Vincent Perez, M.A.; PT
Joan Pfitzenmaier, PT
Martin Roy, Ph.D.
Lenny Sadowsky, RFEMT/P
Susan C. Schiliro, D.P.T.; PT
Frederick Schiang
Greg Sweeney, PT
Catherine Van Olden, PT
Harvey Wishe, Ph.D.
Mariana Zane, M.D.

**DEGREE REQUIREMENTS**

This concentration requires a minimum of 36 points including a master’s thesis pertaining to the scientific study of pathological human motion or intervention procedures designed to improve motor control. A total of 6 points may be taken outside of New York University and may be transferred for credit to the degree as long as prior permission and approval have been obtained from the adviser and the Graduate Studies Office.

**Requirements** (32 points): Research in Physical Therapy I E44.2016, Research in Physical Therapy II E44.2018, Analysis and Synthesis of Human Motion I E44.2116, Analysis and Synthesis of Human Motion II E44.2118, Measurement and Evaluation of Human Motion I E44.2187, Measurement and Evaluation of Human Motion II E44.2188, Independent Study E44.2300, Basic Statistics I E10.1085 (or an advanced statistics course), Basic Statistics II E10.1086 (or an advanced statistics course), master’s thesis.

**Elective Courses** (6 points): Gross Human Anatomy E44.2120.

**ADMISSION REQUIREMENTS**

Only graduate physical therapists with a minimum of a baccalaureate degree in physical therapy will be considered as candidates for matriculation in the pathokinesiology master’s concentration. It is anticipated that the candidate will have one year of clinical experience prior to undertaking this M.A. concentration. Foreign-trained physical therapists should first request review of their credentials from the World Education Services, Bowling Green Station, P.O. Box 5087, New York, NY 10274-5087. See general admission section, page 204.

**SPECIAL OPPORTUNITIES**

Opportunity exists for graduate students to perform instruction in portions of the basic professional courses under the supervision of full-time faculty. These teaching experiences may be formulated on an individual basis by the student’s adviser. This type of experience is considered essential as many candidates for this degree are contemplating a teaching career in physical therapy.
The Doctor of Physical Therapy degree program is the professional physical therapist educational program at New York University that prepares students for entry into the practice of physical therapy. Since physical therapy is a dynamic profession with an established theoretical base and widespread clinical applications, particularly in the preservation, development, and restoration of maximal physical functions, this program is designed to develop competent practitioners for contemporary practice.

The program enables students to become physical therapists who seek to prevent injury, impairments, functional limitations, and disabilities; to maintain and promote fitness, health, and quality of life; and to ensure availability, accessibility, and excellence in the delivery of physical therapy services to the patient. Since physical therapists will be essential participants in the health care delivery system, graduates will be prepared to assume leadership roles in prevention and health maintenance programs and rehabilitation services and to assist in the development of health policy standards tied to physical therapy practice.

In order to meet the changing needs of the health care delivery system, the Doctor of Physical Therapy program seeks to graduate an autonomous practitioner with the expertise and skills to examine, evaluate, and diagnose physical impairments as a result of injury, disease, or disability. After assessment, the physical therapist practitioner will apply appropriate interventions and treatments and reassess patient progress. This autonomous practitioner will also evaluate patients as to their prognosis and work with other health care professionals to develop a comprehensive treatment plan.

**CAREER OPPORTUNITIES**

Graduates from this program will practice as physical therapist clinicians in a variety of settings.

**DEGREE REQUIREMENTS**

This program requires the completion of 133 credits including three major papers—a review of the literature, a case report, and the development of a research plan. See courses by semester starting on page 137.

**ADMISSION REQUIREMENTS**

Applicants must have a bachelor's degree. Applicants must complete the Graduate Record Examination; have an academic record that demonstrates a balance of course work in the humanities, social sciences, and natural sciences, including at least two laboratory courses in biology, chemistry, and physics; evidence of clinical observations in three distinct physical therapy practice settings (total of 24 hours); a strong GPA in the prerequisite natural science courses; competence in conveying ideas in an organized manner through written communication that demonstrates critical and logical thinking; interpersonal communications skills; evidence of community service and leadership; and two letters of reference from licensed physical therapists.

See general admission section, page 204.

**DOCTOR OF PHYSICAL THERAPY TUITION**

Under the DPT Secured Tuition Plan, students pay a flat rate of tuition each term based on a total tuition amount that is secured for the duration of their studies. Students must maintain consecutive registrations (excluding maintenance of matriculation and/or leave of absence) in order to be eligible for the flat tuition rate guaranteed at the time of their matriculation.

New tuition rates for the DPT Secured Tuition Plan are posted on our Web site: www.steinhardt.nyu.edu/pt.
The Doctor of Physical Therapy (D.P.T.) for Practicing Physical Therapists Program is designed to educate professional physical therapists who are knowledgeable, self-assured, adaptable, reflective, humanistic, and service-oriented and who, by virtue of critical thinking, lifelong learning, and ethical values, render independent judgments concerning patient/client needs.

The D.P.T. for Practicing Physical Therapists Program will enable currently practicing, licensed physical therapists to upgrade their clinical knowledge and skills to today's entry-level professional doctoral degree. Practicing physical therapists who were educated at the certificate, baccalaureate, or master's level will have the opportunity to increase their knowledge and skill in the areas of anatomy, exercise science, physical therapist examinations and interventions, business practices, and critical inquiry. Upgrading the knowledge and skill of practicing physical therapists to the doctoral level (D.P.T.) will enable them to better serve their patients and clients.

**ADMISSION REQUIREMENTS**

Only physical therapists with a minimum of a baccalaureate degree will be considered as candidates for matriculation in the Doctor of Physical Therapy for Practicing Physical Therapists Program. Applicants must have a strong grade point average; competence in conveying ideas in an organized manner through written communication; two letters of reference; and scores from the Graduate Record Examination. Applicants whose first language is not English are required to take the Test of English as a Foreign Language (TOEFL). All records from foreign colleges must be submitted for credentials evaluation in accordance with University policy. See general admission section, page 204.

**DEGREE REQUIREMENTS**

This part-time program requires a total of 36 credits beyond the baccalaureate degree.

**Research in Physical Therapy**

**Director**

Wen Ling

380 Second Avenue, 4th Floor
212-998-9415

**Degree**

Ph.D.

**Faculty**

Batavia, Becker, Goerdt, Linnuzzi, Ling, McDonough, Mehreteab, Moffat, Tunik, Weaver

**Adjunct Faculty**

Accettola, Aqua, Ciotoli, County, deRenzy, Edelstein, Friedman, Haas, Keller, Lim, Malyango, McGuinness, O'Brien, Pensavalle Roy, Wishe, Zane

The formulation of theoretically based studies of human motion in healthy and physically challenged persons that make a contribution to the body of pathokinesiological literature are fundamental to the physical therapy doctoral program. The Ph.D. program emphasizes the study of kinesiology, the measurement of human motion, and issues in motor control. The application of these content areas is to those with physical disabilities, and studies are encouraged that contribute to the alleviation of disability. Preparation in research design and methodology is emphasized along with pathokinesiology practicum in research settings under the supervision of experienced researchers in metropolitan New York and New Jersey human performance laboratories.

**CAREER OPPORTUNITIES**

Of the 60 graduates of this doctoral program, all are actively engaged in teaching and research in physical therapy in institutions of higher learning in the United States and in Nigeria, Kuwait, Egypt, Thailand, and Taiwan. For example, Dr. Jules Rothstein, a graduate of this doctoral program, is the editor of the *Journal of Physical Therapy* and chair of the Physical Therapy Program at the University of Illinois. Dr. Isaac Owoye is conducting research and teaching at the University of Ibadan, Nigeria. Dr. Chuchuka Enwemeka is chair of the Physical Therapy Department at the University of Kansas and has developed an international reputation in research on the healing of connective tissues. Dr. Prapos Pothongsunun is chair of the Physical Therapy Program at Chiang Mai University, Thailand.

**DEGREE REQUIREMENTS**

**Foundation Courses** (6 points): from, for example, Foundations of Education: Educational Sociology E20.2400, Educational Psychology E63.1014, Introduction to Philosophy of Education E50.2003.

**Research Electives** (15 points): Experimental and Quasi-Experimental Design and Analysis Research E10.2134.

**Seminar** (3 points): Departmental Seminar E44.3006.

**Content Preparation in Study of Human Motion** (18 points): Practicum in Pathokinesiology Research I and II E44.3001,3002, Analysis and Synthesis of Human Motion I E44.2116, Analysis and Synthesis of Human Motion II E44.2118, Measurement and Evaluation of Human Motion I E44.2187, Measurement and Evaluation of Human Motion II E44.2188.

**Cognate Courses** (6 points).

**Investigative Skills** (3 points): Experimental and Quasi-Experimental Design and Analysis Research E10.2134.


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**E20.2400**

**E10.2131**

**E10.2134**

**E63.1014**

**E50.2003**

**E44.3001,3002**

**E44.2116, E44.2118**

**E44.2187, E44.2188**

**E44.3006**

**E44.2118, E44.2187**

**E45.3005**

**E44.2188**

**E10.2001,2002**

**E10.2081,2082**

**E10.2131**

**E10.2134**

**E10.3001**

**E44.3003**

**E44.2187, E44.2188**

**E44.3006**

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**E20.2400**

**E10.2131**

**E10.2134**

**E63.1014**

**E50.2003**

**E44.3001,3002**

**E44.2116, E44.2118**

**E44.2187, E44.2188**

**E45.3005**

**E44.2188**

**E10.2001,2002**

**E10.2081,2082**

**E10.3001**

**E44.3003**

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**E20.2400**

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**E10.2134**

**E63.1014**

**E50.2003**

**E44.3001,3002**

**E44.2116, E44.2118**

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**E45.3005**

**E44.2188**

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**E10.3001**

**E44.3003**

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**E20.2400**

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**E10.2134**

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**E44.2116, E44.2118**

**E44.2187, E44.2188**

**E45.3005**

**E44.2188**

**E10.2001,2002**

**E10.2081,2082**

**E10.3001**

**E44.3003**

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**E20.2400**

**E10.2131**

**E10.2134**

**E63.1014**

**E50.2003**

**E44.3001,3002**

**E44.2116, E44.2118**

**E44.2187, E44.2188**

**E45.3005**

**E44.2188**

**E10.2001,2002**

**E10.2081,2082**

**E10.3001**

**E44.3003**

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SPECIAL OPPORTUNITIES
Several clinical research laboratories are available to doctoral candidates to work under the supervision of an experienced researcher in physical therapy: Arthur J. Nelson Jr. Human Performance Analysis Laboratory, NYU Department of Physical Therapy; Balance Training Laboratory, Cardiopulmonary Laboratory of the NYU Rusk Institute of Rehabilitation Medicine; Rehabilitation Engineering Research Center, VA Medical Center, New York City; and the Research Laboratories of the Kessler Institute for Rehabilitation.

ADMISSION REQUIREMENTS
Candidates for admission must be graduates of an accredited physical therapy program, possess a master’s degree, and submit positive recommendations from two graduate faculty members.

FINANCIAL AID OPPORTUNITIES
The department offers a limited number of graduate assistantships and teaching fellowships. See page 215-16.

M.A./PH.D. PHYSICAL THERAPY

Courses
The courses listed herein are to be offered in 2007-2009.

Measurement and Evaluation of Human Motion II
E44.2188 Ling. 45 hours: 3 points. Spring.
Prerequisite: E44.2187.

Laboratory Research
E44.2001 15 hours: 3 points. Fall, spring.
Prerequisite: courses in human anatomy, kinesiology, and physiology.

Research in Physical Therapy I
E44.2106 30 hours: 3 points. Fall, spring.
Logic and scientific thinking; the identification of research problems; research methodology, analysis, and interpretation of data with special reference to the physical therapy field.

Research in Physical Therapy II
E44.2108 30 hours: 3 points. Spring, summer.
Logic and scientific thinking; the identification of research problems; research methodology, analysis, and interpretation of data with special reference to the physical therapy field.

Analysis and Synthesis of Human Motion I
E44.2116 45 hours: 3 points. Fall.
Prerequisites: courses in human anatomy, kinesiology, and physiology.
Integration of facts and principles derived from the fields of anatomy, physiology, and biomechanics with implications for normal physical activity, conditioning, and therapeutic exercise; research approach.

Analysis and Synthesis of Human Motion II
E44.2118 45 hours: 3 points. Spring.
Prerequisites: courses in human anatomy, kinesiology, and physiology.
Analysis of abnormal motion and the procedures employed in its modification.

Measurement and Evaluation of Human Motion I
E44.2187 Ling. 45 hours: 3 points. Fall.
The theoretical basis, principles, and techniques of kinesiological electromyography and motion analysis of normal and abnormal human motion.

Measurement and Evaluation of Human Motion II
E44.2188 Ling. 45 hours: 3 points. Spring.
Prerequisite: E44.2187.
Theoretical basis, principles, and techniques of dynamometry; the integration of kinesiological electromyography, motion analysis, and dynamometry.

Practicum in Pathokinesiology Research I
E44.3001 90 hours: 3 points. Fall.
Experience in clinical research centers under supervision of experienced clinical researchers of problems concerned with human motion of cardiopulmonary function.

Practicum in Pathokinesiology Research II
E44.3002 90 hours: 3 points. Spring.
Experience in clinical research centers under supervision of experienced clinical researchers of problems concerned with human motion of cardiopulmonary function.

Doctoral Colloquium: Physical Therapy
E44.3010 15 hours: 1 point. Fall, spring.
Pass/fail.
Required every semester of all doctoral students who are working on their proposal/dissertations. Taken in lieu of Doctoral Advisement Fee. Provides an opportunity for students to share the most recent development of their proposals/dissertations. Students are expected to report on their own research projects and critique the projects of others in the class. Presentations on research design, statistics, procedures for validity and reliability measures, and grant-writing skills are included.

DOCTOR OF PHYSICAL THERAPY

Summer

Histology/General Pathology
E44.2004 45 hours: 3 points. Summer.
Overview of microanatomical structure from the perspective of cells, tissues, and systems. The four tissue types are studied including epithelial, connective, nervous,
and muscular tissues. Basic concepts of cell and tissue injury and disease are presented, including examination of acute and chronic inflammation and immune and autoimmune responses.

CPR/First Aid Advanced Emergency Techniques
E44.2030 30 hours: 2 points. Summer.
Provides the student with all of the skills necessary to take appropriate action in an emergency in any practice setting.

Gross Human Anatomy
E44.2120 60 hours: 4 points. Summer.
$65 laboratory fee required.
Overview of human anatomy of the muscular, skeletal, nervous, and circulatory systems. Anatomical models and specimens complement didactic classroom activities.

Professional Behavior
E44.2281 30 hours: 2 points. Summer.
History of the profession, the professional association (American Physical Therapy Association), professionalism, and individual and cultural differences. The student demonstrates professional behavior in all interactions with patients, clients, families, caregivers, and other health care providers. Enables the student to practice in a safe setting and manner to minimize risk to the patient, client, therapist, and others; be aware of the practices and ramifications of sexual harassment; identify and assess the health needs of individuals, groups, and communities including screening, prevention, and wellness programs appropriate to physical therapy; display generosity as evidenced by the use of time and effort to meet patient or client needs; and demonstrate social responsibility, citizenship, and advocacy including participation in community and human service organizations and activities.

Fall, First Year

The Physical Therapist as an Educator/Communicator
E44.2020 30 hours: 2 points. Fall, first year.
Enables the student to provide patient-related instruction; educate others using a variety of teaching methods that are commensurate with the needs and unique characteristics of the learner; provide consultative services using the physical therapist’s skills to individuals, businesses, schools, government agencies, or other organizations; expressively and receptively communicate with patients, clients, family, caregivers, practitioners, consumers, payers, and policy-makers; and take responsibility for communication or discussion of diagnoses or clinical impressions with other practitioners.

Applied Anatomy/Physiology of the Cardiopulmonary System
E44.2024 45 hours: 3 points. Fall, first year.
In-depth knowledge of human anatomy and the principles of regulation of function of the cardiac, circulatory, and pulmonary systems. Anatomical models and specimens complement didactic classroom activities.

Life-Span Development
E44.2209 45 hours: 3 points. Fall, first year.
Provides an in-depth knowledge of human development throughout the life cycle. The student is given the foundation on which typical and atypical behavior may be compared.

Physical Agents and Mechanical Modalities (Including Aseptic Techniques/Infection and Disease Control)
E44.2215 60 hours: 4 points. Fall, first year.
 Enables the student to apply physical agents, including deep thermal modalities (e.g., ultrasound), athermal modalities (e.g., pulsed ultrasound, pulsed electromagnetic fields), superficial thermotherapy (e.g., heat, paraffin baths, hot packs, hydrotherapy), cryotherapy modalities (e.g., cold packs, ice massage), hydrotherapy (e.g., whirlpools, tanks, contrast baths), and phototherapies (e.g., ultraviolet) in order to increase connective tissue extensibility, modulate pain, reduce or eliminate soft tissue inflammation and swelling caused by musculoskeletal injury or circulatory dysfunction, increase the healing rate of open wounds and soft tissue, remodel scar tissue, or treat skin conditions. The basic effects of the physics, physiology, and psychology of each modality are presented. Basic aseptic techniques including practice of universal precautions to prevent infection; cross-contamination; and spread of bacterial, fungal, and viral infections.

Exercise Physiology
E44.2225 60 hours: 4 points. Fall, first year.
Physiological and pathophysiological principles for understanding the response of the human body to exercise. The musculoskeletal, pulmonary, cardiovascular, and metabolic responses to exercise and their implications in physical therapy intervention are explored.

Applied Anatomy/Physiology of the Musculoskeletal System
E44.2230 45 hours: 3 points. Fall, first year.
In-depth knowledge of human anatomy and the principles of regulation of function of the muscular and skeletal systems.

Anatomical models and specimens complement didactic classroom activities.

Spring, First Year

Manual Techniques
E44.2008 45 hours: 3 points. Spring, first year.
This course enables the student to apply manual therapy (including mobilization and manipulation), which consists of a broad group of passive interventions in which physical therapists use their hands to modulate pain, increase joint range of motion, reduce soft tissue inflammation, induce relaxation, improve contractile and noncontractile tissue extensibility, and improve pulmonary function.

Clinical Sciences/Pathology/Imaging/Pharmacology of the Cardiopulmonary System
E44.2026 60 hours: 5 points. Spring, first year.
Analysis of the etiology, pathology, and clinical sciences of cardiac, circulatory, and pulmonary diseases, disorders, and disabilities. Imaging techniques and clinical/laboratory assessment techniques and pharmacological interventions are presented.

Kinesiology/Biomechanics/Ergonomics
E44.2220 60 hours: 5 points. Spring, first year.
Study of normal and abnormal human motion, including gait and posture. Macrophysiological and biomechanical principles are defined and applied to static and dynamic movement. Once developed, basic concepts are applied to specific joints, the trunk, and spine.

Principles of Exercise
E44.2227 45 hours: 3 points. Spring, first year.
Analysis of underlying principles of the following types of therapeutic exercise: stretching; strengthening; active; assistive; active resistive, using manual resistance, pulleys, weights, hydraulic, elastic, robotic, and mechanical or electromechanical devices; neuromuscular relaxation, inhibition, and facilitation; neuromuscular reeducation; motor training or retraining; developmental activities; breathing exercises, including ventilatory muscle training; aerobic endurance activities, using cycles, treadmills, steppers, pools, manual resistance, pulleys, weights, hydraulic, elastic, robotic, and mechanical or electromechanical devices; aquatic exercises; and conditioning and reconditioning.
Fitness Theory and Practice
E44.2229 30 hours: 2 points. Spring, first year.
Theoretical and practical aspects of physical fitness. The course enables the student to evaluate, design, and implement fitness and conditioning programs. Health, safety, and injury prevention are discussed. The importance of an active lifestyle as a health behavior and the role of physical activity in preventing cardiovascular disease and promoting health and longevity are discussed.

Critical Inquiry and Clinical Decision Making I
E44.2286 30 hours: 2 points. Spring, first year.
Students utilize critical inquiry by applying the principles of scientific method to read and interpret professional literature. Students apply the principles of clinical decision making in the delivery of patient or client care to include identification of the problem; collection and interpretation of data; formulation of hypothesis; acceptance or rejection of hypothesis; determination of clinical decision; deliberate action; and reevaluation of actions. The final outcome of this course is a review of the literature.

Summer, First Year
Clinical Affiliation I
E44.2450 40 hours per week for 6 weeks: 2 points. Summer, first year.
This experience enables the student to participate in clinical education to enhance knowledge, values, and skills as a practitioner and integrate and apply course work in the clinical setting.

Fall, Second Year
Clinical Sciences/Pathology/Pharmacology/Imaging of the Musculoskeletal System
E44.2231 60 hours: 4 points. Fall, second year.
Analysis of the etiology, pathology, and clinical sciences of muscular and skeletal diseases, disorders, and disabilities. Imaging techniques and clinical/laboratory assessment techniques and pharmacological interventions are presented.

Applied Anatomy/Physiology of the Neuromuscular System
E44.2232 45 hours: 3 points. Fall, second year.
In-depth knowledge of human anatomy and the principles of regulation of function of the central, peripheral, and autonomic nervous systems and their relationship to the muscular system. Anatomical models and specimens complement didactic classroom activities.

Physical Therapy Examinations of the Cardiopulmonary System
E44.2250 60 hours: 4 points. Fall, second year.
Students independently examine and reexamine a patient or client with a cardopulmonary problem by obtaining a pertinent history from the patient or client and from other relevant sources, by performing relevant systems review, and by selecting appropriate age-related tests and measures. Synthesize examination data to complete the physical therapy evaluation.

Physical Therapy Examinations of the Musculoskeletal System
E44.2251 60 hours: 4 points. Fall, second year.
Provides the student with an opportunity to independently examine and reexamine a patient or client with a musculoskeletal problem by obtaining a pertinent history from the patient or client and from other relevant sources, by performing relevant systems review, and by selecting appropriate age-related tests and measures. Synthesize examination data to complete the physical therapy evaluation. Engage in the diagnostics process.

Critical Inquiry and Clinical Decision Making II
E44.2287 30 hours: 2 points. Fall, second year.
Design and implementation of decision-making guidelines in order to utilize outcome effectiveness and efficiency studies to establish, implement, and evaluate the effectiveness of patient or client protocols. The student uses a case report as a vehicle for identifying clinical problems, assessing measuring devices, and collecting and interpreting data to aid in clinical decision making.

Clinical Observation I
E44.2455 1 day per week for 12 weeks: 1 point. Fall, second year.
This experience enables the student to participate in clinical education through observation of master clinicians.

Spring, Second Year
Physical Therapy Interventions/Prevention Programs/Wellness Programs for the Cardiopulmonary System
E44.2260 60 hours: 4 points. Spring, second year.
Establish a safe and effective physical therapy plan of care; establish goals and functional outcomes that specify expected time duration; define achievable patient or client outcomes within available resources; monitor and adjust the plan of care in response to patient or client status; and provide direct physical therapy intervention to achieve patient or client outcomes based on the examination and on the impairment, functional limitations, and disability; promote optimal health by providing information on wellness, impairment, disease, disability, and health risks related to age, gender, culture, and lifestyle; provide primary, secondary, or tertiary care to patients in collaboration with other practitioners in settings supportive of comprehensive and complex services based on patient’s or client’s goals and expected functional outcomes and on knowledge of one’s own and others’ capabilities.

Physical Therapy Interventions/Prevention Programs/Wellness Programs for the Musculoskeletal System
E44.2261 60 hours: 4 points. Spring, second year.
For description, see E44.2260 above.

Electrotherapeutic Modalities
E44.2218 45 hours: 3 points. Spring, second year.
Electrotherapeutic modalities, including alternating, direct, and pulsed current (e.g., high-voltage galvanic stimulation, interferential current); neuromuscular electrical stimulation (NMES); functional electrical stimulation (FES) for improving posture or movement; transcutaneous electrical nerve stimulation (TENS); iontophoresis, electrical muscle stimulation; and biofeedback in order to modulate or decrease pain; reduce or eliminate soft tissue inflammation caused by musculoskeletal, neuromuscular, peripheral vascular, or integumentary injury, disease, developmental delay, or surgery.

Prescription, Application, and, as Appropriate, Fabrication of Assistive, Adaptive, Orthotic, Protective, Supportive, and Prosthetic Devices and Equipment
E44.2219 45 hours: 3 points. Spring, second year.
Enables the student to understand the physical properties and biomechanical principles of devices and equipment; to prescribe, apply, and fabricate, as appropriate, adaptive, orthotic, protective, supportive, and prosthetic devices and equipment for ADL and IADL; to analyze their use during ADL and IADL; and to evaluate the limitations and indications/contraindications of devices and equipment. The course enables the student to practice fabricating adaptive, supportive, and protective devices.
Clinical Sciences/Pathology/Pharmacology/Imaging of the Neuromuscular System
E44.2242 60 hours: 4 points. Spring, second year.
Analysis of the etiology, pathology, and clinical sciences of neuromuscular diseases, disorders, and disabilities. Imaging techniques and clinical/laboratory assessment techniques and pharmacological interventions are presented.

Clinical Observation II
E44.2456 1 day per week for 12 weeks: 1 point. Spring, second year.
This experience enables the student to participate in clinical education through observation of master clinicians.

Summer, Second Year
Clinical Affiliation II
E44.2451 40 hours per week for 8 weeks: 3 points. Summer, second year.
Students are presented with the opportunity to participate in clinical education to enhance knowledge, values, and skills as a practitioner and integrate and apply course work in the clinical setting.

Fall, Third Year
Applied Anatomy/Physiology of the OB/GYN, Integumentary, and Endocrinology Systems
E44.2233 45 hours: 3 points. Fall, third year.
In-depth knowledge of human anatomy and the principles of regulation of function of the reproductive, renal, integumentary, and endocrine systems. Anatomical models and specimens complement didactic classroom activities.

Clinical Sciences/Pathology/Pharmacology/Imaging of the OB/GYN, Integumentary, and Endocrinology Systems
E44.2243 60 hours: 4 points. Fall, third year.
Analysis of the etiology, pathology, and clinical sciences of reproductive, renal, integumentary, and endocrine diseases, disorders, and disabilities. Imaging techniques and clinical/laboratory assessment techniques and pharmacological interventions are presented.

Physical Therapy Examinations of the Neuromuscular System
E44.2252 60 hours: 5 points. Fall, third year.
Students examine and reexamine a patient or client with a neuromuscular problem by obtaining a pertinent history from the patient or client and from other relevant sources, by performing relevant systems review, and by selecting appropriate age-related tests and measures. Synthesize examination data to complete the physical therapy evaluation.

Physical Therapy Examinations of the OB/GYN, Integumentary, and Endocrinology Systems
E44.2253 45 hours: 3 points. Fall, third year.
Enables the student to independently examine and reexamine a patient or client with OB/GYN, integumentary, or endocrine problems by obtaining a pertinent history from the patient or client and from other relevant sources, by performing relevant systems review, and by selecting appropriate age-related tests and measures. Synthesize examination data to complete the physical therapy evaluation and engage in the diagnostic process.

Critical Inquiry/Clinical Decision Making III
E44.2288 30 hours: 2 points. Fall, third year.
Student integrates knowledge in physical therapy with statistics and research design to critically analyze current physical therapy literature. Each student develops a research plan with a given topic.

Clinical Observation III
E44.2457 1 day per week for 12 weeks: 1 point. Fall, third year.
This experience enables the student to participate in clinical education through observation of master clinicians.

Spring, Third Year
The Physical Therapist as an Administrator/Delegator/Manager
E44.2019 30 hours: 3 points. Spring, third year.
Management of human and material resources and services to provide quality, efficient, and cost-effective physical therapy services based on patient’s or client’s goals; interact with patients, clients, family members, other health care providers, and community-based organizations for the purpose of coordinating activities to facilitate efficient and effective patient or client care; delegate physical therapy-related services to appropriate human resources; supervise and manage support personnel to whom tasks have been delegated; and participate in management, budgeting, billing, and reimbursement activities.

Physical Therapy Interventions/Prevention Programs/Wellness Programs for the OB/GYN, Integumentary, and Endocrinology Systems
E44.2262 90 hours: 6 points. Spring, third year.
Students establish a safe and effective physical therapy plan of care; establish goals and functional outcomes that specify expected time duration; define achievable patient or client outcomes within available resources; monitor and adjust the plan of care in response to patient or client status; and provide direct physical therapy intervention to achieve patient or client outcomes based on the examination and on the impairment, functional limitations, and disability.

Business Practices/Reimbursement/Marketing/Technology/Management of Care Delivery System
E44.2295 60 hours: 4 points. Spring, third year.
Implementation of marketing plans and related public relations activities; know major reimbursement guidelines; how to reflect patient or client care activities in all billing; apply time management principles to patient or client treatment scheduling; and understand and exhibit responsibility for practicing within the guidelines of third-party payers.

Clinical Observation IV
E44.2458 1 day per week for 12 weeks: 1 point. Spring, third year.
This experience enables the student to participate in clinical education through observation of master clinicians.

Summer, Third Year
Clinical Affiliation III
E44.2452 40 hours per week for 16 weeks: 6 points. Summer, third year.
This experience enables the student to participate in clinical education to enhance knowledge, values, and skills as a practitioner and integrate and apply all course work in the clinical setting.