



PhD in Rehabilitation Sciences

Program Mission

To prepare Doctors of Philosophy (PhD) who will take leadership roles as researchers and educators in rehabilitation sciences, and who can conduct research that will ultimately impact the quality of life for individuals with limitations in motor function.

PhD Program Overview

The field of rehabilitation sciences has become more exciting, more complex and more demanding. By integrating clinical and basic sciences, Drexel's faculty members educate high quality rehabilitation research scientists with a background that is both broad in scope and rigorous in depth. Our graduates are prepared within the contextual paradigm of disability research to expand the body of knowledge in rehabilitation and movement sciences through understanding the mechanisms of movement impairments, preventing and reducing movement dysfunctions and disability, and promoting health and physical performance in people across the lifespan.

Program Features

- Over 20 year history of PhD education
- Interest-based concentrations in movement science, orthopedics, and pediatrics
- Flexible, in-depth research residency
- Excellent, efficient, accelerated, 48-quarter-credit curriculum for students with graduate degrees, e.g. MS, DPT (*compared to a typical 60-semester-credit curriculum*)
- Convenient part-time study options
- Onsite classes offered on a designated week day for scheduling ease
- Premier facilities and a dynamic learning environment
- Infused with the latest technology, offering selected courses online
- Federally-funded (NIH, NIDRR, CIHR) faculty researchers

Curriculum

The curriculum offers considerable freedom in structuring an individualized program. Courses are available through a mix of traditional, online, weekend, intensive, independent studies and practica. Onsite courses are scheduled on a designated week day, in the late afternoon/evening or on weekends for scheduling ease. Core courses are offered in research and teaching with additional courses and seminars in the student's chosen area of interest. Students can select a concentration in orthopedics, pediatrics or movement science. The curriculum is condensed from the conventional 60 *semester* hour requirement to an enhanced 48 *quarter* credit minimum for students entering with a graduate education (*additional credits required for students entering with bachelor's degrees*).

Doctoral Residency

Consistent with the highest standards in quality PhD education, students immerse themselves in study with a research mentor. Scheduling of the onsite residency period is flexible, depending on the research plan and the faculty-student contract.

Research Facilities

Our facilities include over 2000 square feet of well-equipped research laboratory space (Biomechanics, Movement Science, Pediatrics, and Neuromuscular Performance Labs), with Equipment including force plates, EMG, motion analysis and human performance measurement equipment. The PhD program has active clinical research networks with Shriners Hospitals, St. Christopher's Hospital, 11th Street Family Health Services, Excel PT, Physiotherapy Assoc. and Magee Rehabilitation.

For more information contact:

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<http://www.drexel.edu/physicalTherapy/>

Apply online at:

<http://www.drexel.edu/em/apply/cnhp/>

Drexel University
Application Processing
P.O. Box 34789
Philadelphia PA, 19101



PhD Program Faculty

Lisa Ann Chiarello, PT, PhD, PCS, Associate Professor. Dr. Chiarello is currently chair of the APTA Section on Pediatrics' Practice Committee. *Research:* Principal Investigator for a NIDRR-funded project, "Understanding Determinants of Motor Abilities and Engagement in Self-Care and Play for Young Children with Cerebral Palsy." Research interests include models of service delivery in early intervention, family-centered care, parent-child interactions, and play.

David Ebaugh, PT, PhD, Assistant Professor. Dr. Ebaugh's research interest is in shoulder girdle biomechanics. His primary focus is the identification of neuromuscular control impairments and related neuromusculoskeletal factors associated with overuse injuries of the shoulder. The long-term goal of his research is to improve our understanding of how overuse injuries contribute to impairments in shoulder girdle neuromuscular control and, subsequently, to develop more effective interventions to prevent or rehabilitate shoulder pain and functional limitations.

Margaret O'Neil, PT, PhD, MPH, Associate Professor. Dr. O'Neil has a joint appointment in the College of Nursing and Health Professions and School of Public Health. She recently concluded her work as a Principal Investigator on an NIH grant examining parent interventions on health outcomes in childhood overweight. Dr. O'Neil is active in the APTA (Section on Pediatrics, Research Committee) and APHA, MCH Section. *Research:* health promotion for children with disabilities and/or overweight; environmental resources; physical activity.

Margo N. Orlin, PT, PhD, Associate Professor. Dr. Orlin recently received the Ethel and Jack Hausman Clinical Research Scholars Award from the United Cerebral Palsy Research and Education Foundation for her work on the biomechanics of running in children with cerebral palsy. Dr. Orlin has a Scientific Staff appointment at the Philadelphia Shriners Hospital for Children where she conducts this work and work as a co-investigator on a multi-centered study on activity and participation in children with cerebral palsy (CP). *Research:* Lower extremity alignment and biomechanics during walking and running for children with CP; activity and participation of children, youth and young adults with CP; plantar pressure assessment in pediatrics.

Robert J. Palisano, PT, ScD, Professor. Dr. Palisano is Co-Investigator, CanChild Centre for Childhood Disability Research, Ontario, Canada and a member of the Scientific Staff at the Philadelphia Shriners Hospital for Children. He co-edits the *Journal of Physical & Occupational Therapy in Pediatrics*. *Research:* Activity and participation of children with cerebral palsy (CP), determinants of gross motor function and playfulness of young children with CP and transition to adulthood for youth with CP.

Patricia A. Shewokis, PhD, Associate Professor. Dr. Shewokis is a tenured Associate Professor, Movement Scientist and Biostatistician in the College of Nursing and Health Professions at Drexel University and she has a joint appointment in the School of Biomedical Engineering, Science and Health Systems (BIOMED). Her research consists of processes and mechanisms involved in the acquisition, retention, and transfer of cognitive and motor skills; neural plasticity as a function of practicing tasks; and attentional and neural mechanisms involved in brain-computer interface research employing biofeedback in learning paradigms.

Sheri P. Silfies, PT, PhD, Associate Professor. Dr. Silfies is Principal Investigator on an NIH grant examining mechanisms underlying poor trunk motor control in patients with mechanical low back pain (MLBP). Her studies are designed to determine if neural control strategies can be changed by interventions that emphasize trunk control and provide preliminary evidence of a link between hypothesized mechanism and treatment effectiveness. Dr. Silfies' long-term research goal is to differentiate the role and impact of unresolved impairment in trunk motor control on the development of recurrent MLBP.

"The PhD program in Rehabilitation Sciences at Drexel University provided me with the knowledge, skills and confidence necessary to work in many capacities as a clinician, faculty member, and researcher. The program emphasized the importance of performing high quality work and the dissemination of that work through publications and presentations." - Victoria Marchese

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Sample Curriculum for Full-Time Student with Master's or other Graduate Degree

Year	Fall Quarter	Winter Quarter	Spring Quarter	Summer Quarter	Annual Credits
1	<ul style="list-style-type: none"> • Foundations of Research • Introduction to Biostatistics • Measurement Theory 	<ul style="list-style-type: none"> • Research Designs in Rehab • Intermediate Biostatistics • Concentration Course 	<ul style="list-style-type: none"> • Interpretation of Data • Independent Study OR • Research Practicum • Concentration Course 	<ul style="list-style-type: none"> • Independent Study OR • Research Practicum 	29-31
2	<ul style="list-style-type: none"> • Teaching for Rehab Faculty • Scientific Inquiry & Writing • Research Practicum 	<ul style="list-style-type: none"> • Independent Study • Academia for Rehab Scientists • Teaching Practicum 	<ul style="list-style-type: none"> • Dissertation Research 	<ul style="list-style-type: none"> • Dissertation Research 	14-16 or more
3	<ul style="list-style-type: none"> • Dissertation Research 	<ul style="list-style-type: none"> • Dissertation Research 	<ul style="list-style-type: none"> • Dissertation Research (as needed) 		3 or more