

# 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 sciences through understanding the mechanisms of movement impairments, preventing and reducing movement dysfunctions and disability, and promoting health, physical performance, and participation in people across the lifespan.

## Program Features

- Over 25 year history of PhD education
- Individualized plan of study aligned with current faculty research
- 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 two designated week days 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 formats. Onsite courses are scheduled on two designated week days, for scheduling ease. The interprofessional core courses prepare students for collaborative interdisciplinary research. Core courses are offered in research and teaching with additional courses and seminars in the student's chosen area of interest. The curriculum is condensed from the conventional 60 semester hour requirement to an enhanced 48 quarter credit minimum.

## 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 research facilities include over 9,000 square feet of well-equipped research laboratory space (Biomechanics, Gait, Pediatrics, and Neuromuscular Performance Labs), with equipment including force plates, EMG, motion analysis and human performance measurement equipment. This space includes conference rooms, PhD and post doc offices and is located next door to the College's 14,000 square feet, multi-disciplinary clinical practice. The PhD program has active clinical research networks with numerous pediatric and adult healthcare facilities in the region.

### FOR MORE INFO. CONTACT:

**Erin Gabriele, MS • Admissions Coordinator**  
**Phone:** 267.359.5535 • **Email:** [eg374@drexel.edu](mailto:eg374@drexel.edu)  
**Web:** <http://www.drexel.edu/PhysicalTherapy>

### APPLY ONLINE AT:

<https://www.drexel-grad.org/apply/>  
Drexel University Application Processing  
P.O. Box 34789 Philadelphia, PA 19101



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Nursing and  
Health Professions

## PROGRAM FACULTY

### **Lisa Ann Chiarello, PT, PhD, PCS, FAPTA, Professor, Director of the PhD and DHsc Programs**

Dr. Chiarello conducts research in the area of pediatric community-based service delivery, determinants of outcomes, family-centered care, engagement of families and children in rehabilitation, and participation of children with physical disabilities in family, school, and recreational activities. She was principal investigator for the Move & PLAY research study and co-PI for the PT COUNTS study. Dr. Chiarello is currently co-investigator for the Engagement in Pediatric Rehabilitation study and the On Track study on developmental trajectories for children with cerebral palsy. She has had several leadership roles in the APTA Section on Pediatrics and is currently a board member for United Cerebral Palsy of Philadelphia and vicinity.

### **Dr. David Ebaugh, PT, PhD, Associate Clinical Professor**

Dr. Ebaugh's research interest is in shoulder girdle biomechanics. His primary focus is the identification of neuromusculoskeletal impairments associated with shoulder pain and dysfunction. The long-term goal of his research is to develop more effective interventions to prevent or rehabilitate shoulder pain and functional limitations.

### **Margaret A. Finley, PT, PhD, Associate Clinical Professor**

Dr. Finley's research interests are rehabilitation biomechanics of upper extremity function with an emphasis on how scapular mechanics contributes to reaching and daily tasks and the identification and treatment of underlying neuromusculoskeletal factors associated with rotator cuff disease. Her research has strongly relied on biomechanical analyses of human dynamics in functional activities, translating scientific innovation into clinical practice.

### **Clare E. Milner, PhD, FACSM, Associate Professor**

Dr. Milner is a Fellow of the American College of Sports Medicine. Her research interests are the biomechanics of lower extremity injury, injury prevention, and rehabilitation. In particular, she is investigating the biomechanics of overuse injuries in runners, alongside interventions to reduce the risk of reinjury. She also studies walking biomechanics in older adults with a focus on gait after knee replacement. A further interest is in reducing the risk of knee injury in female recreational athletes. Dr. Milner's focus is on keeping people active by applying the tools of biomechanics to reduce injury risk and improve the effectiveness of rehabilitation protocols.

### **Margaret (Maggie) O'Neil, PT, PhD, MPH, Associate Professor**

Dr. O'Neil conducts research on physical activity and fitness measures and interventions in children and youth with disabilities (cerebral

palsy) and chronic conditions (obesity). She conducts clinic and community based research projects to promote active, healthy lifestyles in children and their families. Her research includes environmental influences on physical activity and participation for children and families. Dr. O'Neil has a secondary appointment in the School of Public Health, Department of Community Health and Prevention, where she is an active member of the Maternal and Child Health Workgroup.

### **Margo N. Orlin, PT, PhD, Associate Professor**

Dr. Orlin's research work is in the biomechanics of running in children with cerebral palsy and their participation in activities related to running in their every day lives. Her other scholarly interests include activity and participation of children, youth and young adults with CP; and the continuum of care for individuals with lifelong disabilities. She is a past recipient of Ethel and Jack Hausman Clinical Research Scholars Award, a 3-year grant from the United Cerebral Palsy International Research Foundation for her work in this area. Dr. Orlin has a Scientific Staff appointment at the Philadelphia Shriners Hospital for Children.

### **Robert J. Palisano, PT, ScD, FAPTA, Distinguished University Professor**

Dr. Palisano's research includes classification and prognosis for gross motor function in children and youth with cerebral palsy, determinants of activity and participation in children with physical disabilities, methods of service delivery to improve activity and participation of children with disabilities, and transition to adulthood for youth with physical disabilities. Dr. Palisano is a Scientist at the 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, Physical & Occupational Therapy in Pediatrics, and is associate editor of the textbook Physical Therapy for Children.

### **Sheri P. Silfies, PT, PhD, Associate Professor**

Dr. Silfies is the coordinator for the Department's research labs. Her research focuses on measurement of neuromuscular control. Her work is concentrated in two primary areas: 1) examining mechanisms underlying poor trunk motor control in patients with non-specific low back pain (NSLBP) and 2) assessment of core control in athletes. Dr. Silfies' long-term research goal is to differentiate the role and impact of unresolved impairment in trunk neuromuscular control on the development of recurrent and chronic NSLBP. The current emphasis of studies in athletes is substantiating the proposed link between poor core neuromuscular control and extremity injuries.

## PhD Program in Rehabilitation Sciences • Sample Curriculum for Full-Time Student with Master's or other Graduate Degree

Year	Fall Quarter	Winter Quarter	Spring Quarter	Summer Quarter
1	<ul style="list-style-type: none"> <li>Foundations of Research</li> <li>Foundations in Biostatistics</li> <li>Measurement Theory</li> </ul>	<ul style="list-style-type: none"> <li>Research Methods</li> <li>Intermediate Biostatistics</li> <li>Concentration Course</li> </ul>	<ul style="list-style-type: none"> <li>Interpretation of Data</li> <li>Concentration Course</li> <li>Health Professional Education</li> </ul>	<ul style="list-style-type: none"> <li>Independent Study</li> <li>Research Practicum</li> <li>Academia</li> </ul>
2	<ul style="list-style-type: none"> <li>Scientific Inquiry &amp; Writing</li> <li>Research Practicum</li> <li>Teaching Practicum</li> </ul>	<ul style="list-style-type: none"> <li>Independent Study</li> <li>Teaching Practicum</li> </ul>	<ul style="list-style-type: none"> <li>Dissertation Research</li> </ul>	<ul style="list-style-type: none"> <li>Dissertation Research</li> </ul>
3	<ul style="list-style-type: none"> <li>Dissertation Research</li> </ul>	<ul style="list-style-type: none"> <li>Dissertation Research</li> </ul>	<ul style="list-style-type: none"> <li>Dissertation Research</li> </ul>	<ul style="list-style-type: none"> <li>Dissertation Research</li> </ul>