



# DHSc in Rehabilitation Sciences

## Program Mission

To prepare physical therapists and occupational therapists to take leadership roles as educators and master clinicians in Rehabilitation Sciences and to promote transfer of knowledge, evidence-based practice, professional responsibility, and lifelong learning across a variety of academic and clinical settings.

## Program Overview

The Doctor of Health Science (DHSc) program is designed to be an advanced doctoral degree program for professionals seeking leadership roles in education and/or clinical practice. The program includes foundation courses in the health professions, teaching, research, and the opportunity for focused study in a specialized area of clinical practice such as pediatrics, orthopedics and hand rehabilitation. We have specifically designed the program to accommodate the working professional. The objectives of the DHSc program include four areas: leadership, education, scholarship, and clinical health care practice. Graduates of the DHSc degree in Rehabilitation Sciences will be prepared to:

1. Practice as a master clinician in an area of advanced practice through clinical decision making that is consistent with concepts of client-centered care and current best evidence.
2. Synthesize theory, research, and health care policy relevant to individuals with movement dysfunction to promote transfer of knowledge into clinical practice.
3. Serve effectively as consultants to patients, clients, community organizations, and professional colleagues.
4. Serve effectively as educators in rehabilitation sciences in the academic, clinical, and community settings.
5. Develop and evaluate structure, tests and measures, process, and outcomes of service delivery and/or intervention through scholarship in an area of advanced practice or education.
6. Communicate information effectively through peer-reviewed professional presentations and publications.

## Program Features

- Flexible, individualized program aligned with student's professional goals and responsibilities
- Concentrations in pediatrics, orthopedics, and hand rehabilitation
- Dynamic online learning supplemented with onsite sessions to provide mentorship and foster student engagement
- Comprehensive preparation for clinical leadership and academia
- Foundation in rehabilitation science research

## Curriculum

The DHSc Program consists of a minimum of 48 quarter credits completed part-time over 3 to 5 years. The 48 credits include required didactic courses, an elective course, a practicum experience, and a clinical dissertation project. The curriculum includes 4 *foundation* courses (Leadership & Professional Issues, Health Promotion & Wellness, Informatics in Rehab Sciences, and Evidence Applied to Practice), 4 *teaching* courses (Teaching for Rehab Faculty, Academia for Rehab Scientists, and Teaching Practica I and II), 4 *research* courses (Introduction to Biostatistics, Measurement Theory, Research Designs, and Statistical Applications), 3 *clinical specialization* courses (in pediatrics, orthopedics, or hand and upper quarter rehabilitation), 1 *practicum* experience (advanced practice clinical, administrative /leadership, or teaching practicum), 1 elective (includes opportunity for a research practicum), and a *clinical dissertation*.



### For more information contact:

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 215-762-8852  
 ptadmissions@drexel.edu  
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### Apply online at:

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

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

# Program Faculty

**Lisa Ann Chiarello, PT, PhD, PCS, Associate Professor.** Dr. Chiarello is the Director of the PhD and DHS programs in the Department of Physical Therapy and Rehabilitation Sciences. She is a co-principal investigator on the PT COUNTS research study funded by the Institutes of Education Sciences to understand the association between physical therapy and student outcomes in school-based services. In addition, she is a co-investigator on the current On Track study, a follow-up of the Move and PLAY study, to create developmental trajectories on balance, strength, range of motion, endurance, health conditions, and participation in self-care and recreational activities for children with cerebral palsy. Dr. Chiarello is currently Chair of the APTA Section in Pediatrics Early Intervention Special Interest Group. She conducts research, publishes, and presents nationally and internationally in the areas of community-based practice, family-centered care, and determinants of outcomes and participation of children with physical disabilities.

**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.

**Jane Fedorczyk, PT, PhD, CHT, Clinical Professor, Director of Post-Professional Clinical Programs.** Dr. Fedorczyk is a certified hand therapist and internationally recognized by her publications and presentations on topics such as: tennis elbow, nerve compressions, pain modulation and physical agents. Her research interest is in the area of upper extremity tendinopathies and nerve compression syndromes. She has received grants from the American Association of Hand Surgery and the American Society of Hand Therapists (ASHT) for these studies. She is co-editor of the 6th editions of *Rehabilitation of the Hand and Upper Extremity*. Dr. Fedorczyk currently serves on the board of directors for ASHT, and the Hand Rehabilitation Foundation.

**Clare E. Milner, PhD, FACSM, Associate Professor** Dr. Milner is a Fellow of the American College of Sports Medicine. Her research interest is in the biomechanics of lower extremity injury, injury prevention, and rehabilitation. In particular, Dr Milner 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 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. Her research interests include 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, 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 Scientist, *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*.

**Patricia P. Rubertone, MPT, MSW, Assistant Clinical Professor.** Professor Rubertone is a manuscript reviewer for the *Journal of PT Education* and is a Trainer for APTA's CI Credentialing Program. She also directs the clinical education component of the professional DPT program. Her clinical interest and experience is in adult neurological rehabilitation. Her teaching and research interests include professional development, teaching-learning processes, and assessment of student clinical performance. Professor Rubertone is currently completing her dissertation for her Ed.D degree; using a mixed methods approach, she is examining differences between novice and experienced clinical instructors in judging student clinical performance.

**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 on 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. Her studies in NSLBP are designed to determine if neural control strategies can be changed by interventions that emphasize trunk neuromuscular 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 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.

**Sue Smith, PT, PhD, Associate Professor, Associate Dean for Research & Health Professions Education, College of Nursing and Health Professions, Chair, Department of Health Systems & Sciences Research, Faculty, Department of Physical Therapy and Rehabilitation Sciences Department, and Director of the Osteoporosis Education & Exercise Program.** Dr. Smith is experienced with human performance measurement, multisite studies, and community service programs for older adults. Her research interests include methodological studies particularly related to balance and falls, exercise interventions, and health promotion in patients with pain and dysfunction associated with low back pain, osteoporosis and frailty.

## Doctor of Health Science

### Sample Curriculum for Part-Time Student (\*program can be extended over a 5+ year plan)

Year	Fall Quarter	Winter Quarter	Spring Quarter	Summer Quarter
1	<ul style="list-style-type: none"> <li>Leadership &amp; Professional Issues NHP 767 (2)</li> <li>Introduction to Biostatistics RSCH 519 (3)</li> <li>Onsite program orientation</li> </ul>	<ul style="list-style-type: none"> <li>Application of Evidence to Practice RSCH 758 (2)</li> <li>Health Promotion, Fitness &amp; Wellness NHP 766 (2)</li> </ul>	<ul style="list-style-type: none"> <li>Informatics in Health Professions NHP 680 (2)</li> <li>Health Professional Education NHP 762 (3)</li> </ul>	<ul style="list-style-type: none"> <li>Teaching Practicum 1 RHAB 824 (1)</li> <li>Clinical Question Development RHAB 818 (1)</li> </ul>
2	<ul style="list-style-type: none"> <li>Measurement Theory in Rehab RHAB 813 (3)</li> <li>Teaching Practicum II RHAB 825 (2)</li> </ul>	<ul style="list-style-type: none"> <li>Research Designs in Rehab RHAB 814 (3)</li> <li>Clinical Concentration Course (4)</li> </ul>	<ul style="list-style-type: none"> <li>Biostatistical Applications RSCH 810 (onsite component) (2)</li> <li>Clinical Concentration Course (4)</li> </ul>	<ul style="list-style-type: none"> <li>Academia for Rehab Scientists RHAB 760 (1)</li> <li>Clinical Concentration Course (4)</li> <li>Comprehensive Exam*</li> </ul>
3	<ul style="list-style-type: none"> <li>Elective (3)</li> <li>Clinical Dissertation I RHAB 827 (1)</li> <li>Proposal Defense (onsite)</li> </ul>	<ul style="list-style-type: none"> <li>Clinical Dissertation II RHAB 828 (1)</li> </ul>	<ul style="list-style-type: none"> <li>Practicum</li> </ul>	<ul style="list-style-type: none"> <li>Clinical Dissertation III RHAB 829 (1)</li> </ul>