**Department of Physical Therapy**
**College of Health and Human Services**
**Western Carolina University**

**Request for Authorization to Plan**
**Doctor of Physical Therapy (DPT)**

**Date:** August 31, 2009

**Constituent Institution:** Western Carolina University
**CIP Discipline Specialty Title:** Physical Therapy
**CIP Discipline Specialty Code:** 51.2308 **Level:** Doctoral
**Exact Title of the Proposed Degree:** Doctor of Physical Therapy
**Exact Degree Abbreviation:** DPT
**Does the proposed program constitute a substantive change as defined by SACS?** Yes
**a) Is it at a more advanced level than those previously authorized?** Yes
**b) Is the proposed program in a new discipline division?** No
**Approximate date for submitting the request to establish proposal:** November 2009
**Proposed date to establish degree:** August 2011

This intent to plan a new program has been reviewed and approved by the appropriate campus committees and authorities.

Head, Department of Physical Therapy: _____ Date: _____
Karen Y. Lunnen, PT, EdD

Dean, College of Health and Human Sciences: _____ Date: _____
Linda S. Stanford, PhD

Dean, Research and Graduate Studies: _____ Date: _____
Scott E. Higgins, EdD

Provost: _____ Date: _____
Kyle R. Carter, PhD

Chancellor: _____ Date: _____
John W. Bardo, PhD

**Request for Authorization to Plan**
**Doctor of Physical Therapy (DPT)**
**Degree Program**

## TABLE OF CONTENTS


| TOPIC | PAGE |
|---|---|
| COVER PAGE with SIGNATURES | |
| TABLE of CONTENTS | 2 |
| PURPOSE of REQUEST…… | 3 |
| BACKGROUND…… | 3 |
| 1. DESCRIPTION of PROGRAM | |
| a. Brief Description and Educational Objectives ……... | 6 |
| b. Relationship of Proposed Program to Institutional Mission, Strategic Plan and Response to UNC Tomorrow……. | 6 |
| c. Relationship of Proposed Program to Existing Programs at Institution……. | 9 |
| d. Special Conditions that Make WCU Appropriate Place to Initiate DPT Program…. | 9 |
| 2. INSTITUTIONS IN NORTH CAROLINA CURRENTLY OPERATING SIMILAR PROGRAMS……. | 9 |
| 3. ENROLLMENT…… | 10 |
| 4. DEMAND FOR GRADUATES……... | 10 |
| 5. PLANS TO OFFER PROGRAM AWAY FROM CAMPUS…….. | 11 |
| 6. PROCEDURES FOR PLANNING…….. | 11 |
| 7. METHOD OF FINANCING…… | 12 |
| References…….. | 12 |
| Abbreviated Resumes of Core Faculty - Appendix | 14 |

## INTRODUCTION

Purpose of Request:

This document is a revised version of the original document for Request for Authorization to Plan a Doctor of Physical Therapy (DPT) degree submitted April 2004; revised and re-submitted February 2006. Western Carolina University (WCU) requests permission to transition the current Master of Physical Therapy (MPT) degree to a DPT degree. Transitioning to a DPT would allow the program to move in accordance with other entry-level physical therapy education programs and provide students with the advanced knowledge and skills required for physical therapy practice in an increasingly challenging healthcare environment. The Commission on Accreditation in Physical Therapy Education (CAPTE) has implemented the necessary process to approve a change in the *Evaluative Criteria for Accreditation of Education Programs for the Preparation of Physical Therapists* that would require all entry-level physical therapy programs to award the DPT degree. This increases the urgency for WCU to make the transition.

Background:

In June 2000, the House of Delegates of the American Physical Therapy Association (APTA) approved a vision statement that has had a dramatic impact on physical therapy education. Included in the vision was the phrase, "By 2020, physical therapy will be provided by physical therapists who are doctors of physical therapy…"

This vision was prompted by the profession's response to dramatic changes in healthcare delivery models, physical therapy practice, and professional education. Significant factors included: (1) exponential growth in the breadth, depth and rigor of the professional education needed to prepare competent practitioners, (2) increasing pressures in the clinical practice environment that precluded extensive on-the-job training and mentoring for new graduates, (3) demands for accountability that require evidence-based practice and research to support the efficacy of physical therapy interventions, (4) increasing opportunities for physical therapists to practice autonomously in primary care models and the demands for advanced knowledge required to do so competently and safely, (5) a rapidly growing number of accredited professional education programs at the doctoral level, and (6) changing realities of a more cost-effective and competitive health care and education marketplace.

The transition to doctoral level physical therapy education has occurred with unprecedented speed. The first entry-level doctoral program was accredited in 1995 (Creighton University). Based on data from CAPTE (updated August 2009) there are 212 accredited and eight developing physical therapy education programs in the United States (US). Of those, 201 (94.8 percent) award the DPT degree and all of the developing programs plan to do so. Of the remaining 11 programs, two have received all appropriate approvals, but have not yet submitted official information to CAPTE for its approval; eight have not yet received all required approvals (including WCU and Winston-Salem State University); and one is an expansion program that the institution plans to phase out.

Table I summarizes the increase in the number of DPT programs compared to MPT and bachelor's programs from 2000-2009.

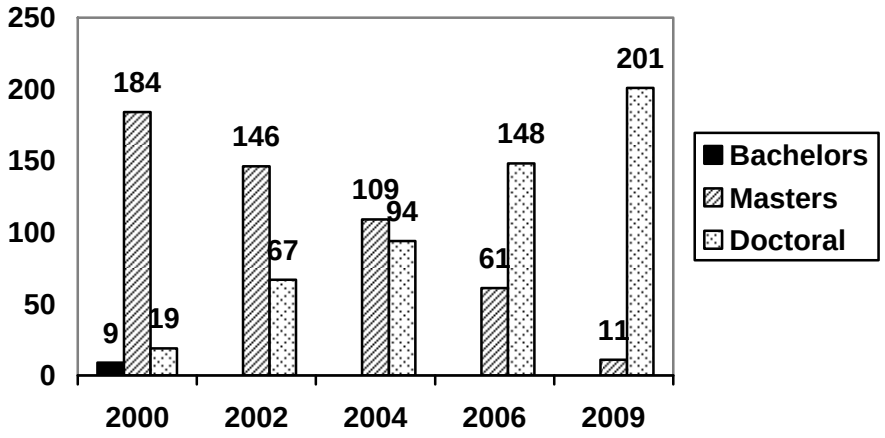


**Table 1-Trend in Number of Programs by Degree Offered**

**(CAPTE website, updated August, 2009)**

Entry-level physical therapy programs offer a professional education for students who have already earned a bachelor's degree to prepare them for entry-level practice in physical therapy. Licensure is required in all states. Applicants for licensure must have graduated from a CAPTE-accredited program and must pass the National Physical Therapy Examination. All physical therapy education programs must comply with current CAPTE *2006 Evaluative Criteria for Accreditation of Education Programs for the Preparation of Physical Therapists* (*Evaluative Criteria*).

Although CAPTE does not yet require the DPT degree for accreditation, 2006 *Evaluative Criteria* reflect the rigor required for physical therapy practice today and APTA's support of doctoral level education. The current Evaluative Criteria, which became effective January 1, 2006, state the following in regards to program length and composition:

> *In order to adequately address the content and learning experiences necessary for students to achieve the expectations listed above, the professional curriculum is at least three academic years (or the equivalent) in length. Preferably, the series of courses included in the professional curriculum is awarded at least 90 semester credit hours (or the equivalent) and the clinical education component of the curriculum includes a minimum of 30 weeks of full-time clinical education experiences.* (CAPTE, *Accreditation Handbook*, B-33)

At its April 2009 meeting, CAPTE voted to proceed with the necessary process to amend the *Evaluative Criteria* for physical therapy education programs to require that the DPT degree be awarded at completion of the program. The proposed criterion would read:

> *CC-7. The institution awards the Doctor of Physical Therapy (DPT) as the first professional degree for physical therapists at completion of the program. [PROVISO:*

> *CAPTE will begin enforcing this criterion effective December 31, 2013. Consistent with CAPTE's expectation that all programs must come into compliance within two years of being determined to be out of compliance, programs that do not meet this criterion as of December 31, 2013 will be required to do so by December 31, 2015. Failure to do will result in withdrawal of accreditation.*

As part of the required process to approve a criterion change, CAPTE is formally soliciting comments from its communities of interest about the proposed change (comment period open through September 30, 2009). The director of CAPTE anticipates that the Commission will amend the *Evaluative Criteria* to require a DPT at its October meeting.

The reality is that WCU's physical therapy program will not remain viable if it does not receive approval to award a DPT degree. WCU's program was developed to address critical shortages of physical therapists in the rural western counties. Physical therapists continue to be in high demand and short supply. Seventeen regional health care systems provided political support, promised to assist with the clinical education of students, and contributed more than $300,000 to a development fund to assure that the physical therapy program at WCU would be approved and would provide quality education. Thirty-three percent of WCU's physical therapy graduates accepted entry-level positions in the 16 western counties, helping to address the shortage of physical therapists and improve the quality of health care for citizens of North Carolina.

The current MPT degree at WCU is a 24-month lockstep curriculum with a total of 78 credit hours and 26 weeks of full-time supervised clinical education. Students have an extended academic calendar so that they can complete the required didactic and clinical hours within the 24 months. As mentioned above, new CAPTE *Evaluative Criteria* will likely require a DPT degree with a significant increase in the total length of the program (at least three academic years), the total number of credit hours (minimum 90 hours) and the number of weeks of full-time clinical education (minimum 30 weeks).

As the number of doctoral programs increases nationwide, the gap is widening between WCU's current MPT program and other accredited physical therapy programs in the United States (US). The data summarized in Table 2 below were taken from CAPTE's Annual Accreditation Report (*2007-2008 Fact Sheet*) based on data collected from the academic programs in October 2007. When the data were compiled, only about 88 percent of the programs were awarding a DPT. As reported previously, as of August 2009, 94.8 percent of programs are awarding a DPT, which further increases the disparity between WCU's program and other programs.

| | **WCU** | **National Mean** | **DPT Mean** |
|---|---|---|---|
| Semester credits required (professional phase) | 78 | 103.4 | 114.6 |
| Total number of weeks in program | 91 | 107.8 | 118 |
| Number of weeks in didactic portion | 67 | 74.2 | 82 |
| Number of weeks in full-time clinical education | 24 | 33.6 | Unavailable |
| Number of weeks in final clinical education experience | 8 | 18 | 20.5 |

**Table 2** – Comparison of mean reported total credits and program length: (1) WCU's physical therapy program (WCU), (2) all entry-level accredited programs in the US (National), and (3) all entry-level accredited DPT programs in the US (DPT) (Based on data from CAPTE's *Annual Accreditation Report for Academic Year 2007-2008*)

WCU's graduates must take the same licensure exam and compete in the same marketplace as graduates from programs that have significantly more credit hours and more time in all phases of their professional education. Until the past year, graduates of WCU's program had consistently achieved pass rates on the national licensing examination which exceeded state and national averages. However, despite excellent students and faculty and a rigorous curriculum, it is unlikely that WCU's graduates can remain competitive if the program does not transition to a DPT.

WCU's program has been able to recruit and retain exceptional faculty in spite of its failure to move forward with other programs nationwide and transition to doctoral level education. The current physical therapy program has seven core faculty members and numerous adjunct faculty who contribute their expertise in specialized areas of instruction. Each of the seven core faculty members has a doctoral degree in his/her respective field, a solid record of scholarship and physical therapy faculty members have experience in various clinical settings. Faculty composition is optimal to cover key content areas in the curriculum. Faculty members are all active in their respective professional association(s) and engaged in community service. Combined, the faculty have more than 94 years of experience teaching in higher education and the Director of Clinical Education held an administrative position with CAPTE for 11 years prior to joining WCU's faculty. An abbreviated resume for each of the core faculty members is included in the appendix.

## 1. DESCRIPTION OF PROGRAM

a. Brief Description and Statement of Educational Objectives:

The proposed DPT program at WCU will be 33 months long with a total of 104 credit hours and 36 weeks of full-time clinical education. It will emphasize content that will best prepare graduates for autonomous practice in a primary care model. This will occur with both the addition of new courses and enhancement of existing courses.

Areas of increased emphasis will include knowledge and clinical skills for differential diagnosis and prognosis in relation to a variety of conditions. Students will receive more in-depth education on medical screening, the interpretation of radiographic imaging and the effects of pharmacologic agents. In accordance with the increased national focus on wellness, students will have additional content on health promotion and illness prevention. They will receive the information and develop skills to analyze human movement using modern technology and they will also have additional content on a variety of professional issues. More emphasis will be given throughout the curriculum on evidence-based practice and research methodology, providing graduates with additional skills to critically appraise scientific literature and conduct clinical research to enhance the evidence supporting physical therapy interventions.

b. Educational Objectives:

Mission: *The primary mission of the Department of Physical Therapy is to graduate physical therapists who will practice autonomously in a variety of settings, practice in a legal and ethical manner, participate in delivery of primary care and interdisciplinary health care services, and promote wellness. Service-learning, clinical experiences, and other educational opportunities will prepare graduates to respond effectively to the special needs of the community and underserved populations. As productive citizens of the larger university community, faculty of the Department of Physical Therapy engage in a broad range of scholarly, service, and educational activities which support the departmental and institutional missions.*

Educational Objectives: After having completed all requirements of the curriculum, including successful performance in didactic and clinical portions, graduates will be able to:

1) *Practice autonomously as competent and ethical physical therapist clinician generalists.*
2) *Communicate effectively with multiple audiences using appropriate strategies and technologies.*
3) *Respect individual and cultural differences.*
4) *Demonstrate professional behaviors during interactions with others.*
5) *Make sound professional judgments consistent with the best available evidence and moderated by patient circumstances and preferences.*
6) *Employ effective educational strategies and technologies when teaching audiences with varied needs.*
7) *Accept responsibility for continual critical assessment of one's practice, personal growth, and professional development.*
8) *Address the physical therapy related health and wellness needs of individuals, groups, and communities.*
9) *Collaborate in the management and administration of systems for patient care and community health.*
10) *Manage resources to achieve goals of the practice setting and facilitate cost-effective health care.*
11) *Advocate for the health and welfare of clients, the profession, and the public.*

b. Relationship of Proposed Program to Institutional Mission, Strategic Plan and Response to UNC Tomorrow:

1) WCU mission:
*Western Carolina University creates engaged learning opportunities that incorporate teaching, research and service through residential, distance education and international experiences. The university focuses its academic programs, educational outreach, research and creative activities, and cultural activities to improve individual lives and enhance economic and community development in the region, state and nation.*

Foremost in its alignment with the institutional mission is that WCU's physical therapy program has had a significant positive impact on manpower shortages in western NC. The program will continue to graduate competent, knowledgeable providers of physical therapy services who also possess the range of professional behaviors necessary to participate in interdisciplinary care, practice ethically and respond sensitively to the needs of underserved populations.

Additionally, WCU's physical therapy program has a national reputation for its commitment to service-learning and integration of engaged learning opportunities throughout the curriculum. As an example, physical therapy students will participate in the following outreach projects during the 2009-2010 Academic Year: (1) needs assessment of Hispanic/Latino farmworkers, (2) aquatic activities for public school students who have disabilities, (3) ergonomic assessments for faculty and staff on WCU's campus, (4) fall risk assessments of elderly residents in the region, (5) specialized educational opportunities (including pro-sected cadaver specimens) for physical therapist assistant students at Southwestern Community College, and (5) development of a model, community-based Falls and Balance Center (a collaborative project in McDowell county).

Physical therapy faculty have provided clinical services at various clinical sites throughout the region, conducted continuing education programs for area clinicians, and consulted on various community-based projects. Earlier faculty-led student projects resulted in: (1) a proposal for faculty-student involvement in provision of interdisciplinary pro bono rehabilitation services for uninsured/under-insured individuals, (2) the development of a cancer rehabilitation program for a regional health care system, (3) applied research to protect the feet of individuals with diabetes (a significant problem among the Cherokee Indians), and (4) validation of a state-funded intervention program for high risk infants.

Transitioning to a DPT will allow even more opportunities to engage students and faculty in activities that promote the mission of the university and implement the UNC Tomorrow initiative.

2) <u>WCU's response to the University of North Carolina Tomorrow initiative and the university's strategic plan (closely linked to the UNC Tomorrow response)</u>:

Included as an initiative in both the UNC Tomorrow response and the strategic plan is to "implement Doctor of Physical Therapy (DPT) program to address rapidly increasing need in the region for well-educated health professionals."

Both documents are grounded in the "Cullowhee Idea" as the most important core value. Although complex in its application the Cullowhee Idea creates a link between the needs of the people in the region (interpreted broadly as the 17 western counties) and the institution's effective response to those needs. Two of the initiatives in the UNC Tomorrow response are: (1) to "utilize integrated learning to focus student engagement on regional needs" and (2) to "develop a culture of applied research and development."

The physical therapy program is already demonstrating some of these initiatives (as summarized above) and will be able to do even more with a curriculum that is broadened in scope and length.

c. Relationship of Proposed Program to Existing Programs at the Institution:

The Department of Physical Therapy at WCU is recognized for the excellence of its faculty and students. Faculty members participate actively in the recruitment and retention efforts for undergraduate students and have collaborated on a variety of clinical, educational and scholarly projects with other programs on campus, including communication disorders, nursing, health sciences and special education. Physical therapy is also collaborating with WCU's engineering technology faculty on the design of specialized assistive technology for individuals with disability. The addition of a state-of-the-art human movement science laboratory (funded by Kate B. Reynolds Charitable Trust) provides exceptional diagnostic services for individuals in the region who have movement disorders as well as diverse cross-disciplinary education and research opportunities.

The program director teaches a course that is part of two grant-funded programs to prepare special educators and speech and language pathologist to work more effectively with students in the public schools who have severe/profound disabilities. And the faculty member who specializes in care of the elderly teaches a graduate level course for students in the gerontology program in the School of Health Sciences.

The transition to a DPT degree program will coincide with the move to the new Health and Gerontology Building (part of Millenial Initiative) offering numerous opportunities for students and faculty to actively engage with other health disciplines in a clinical environment serving patients/clients with disabilities.

d. Special Conditions That Make WCU Appropriate Place to Initiate DPT Program:

The physical therapy program at WCU was established to address critical shortages of physical therapists, particularly in the rural western counties of the state. Of the eleven classes that have graduated from WCU, about 33 percent of the graduates accepted entry-level positions in the 16 western counties and 65 percent in North Carolina (from *Directory of Licensees*, NC Board of Physical Therapy Examiners). Based on information from alumni surveys and informal communications it appears that all graduates who sought employment in physical therapy were able to find positions. Transitioning to a doctoral program will continue to provide the western region and the state of North Carolina with physical therapists who are optimally prepared for professional practice.

## 2. INSTITUTIONS IN NORTH CAROLINA CURRENTLY OPERATING SIMILAR PROGRAMS

Five other institutions of higher education in North Carolina currently offer entry-level physical therapist education:

1. Private Institutions:
    a. Duke University — DPT degree, August 1999
    b. Elon University — DPT degree, December 2001

2. Public Institutions:
    a. East Carolina University — DPT degree, February 2005
    b. The University of North Carolina at Chapel Hill — DPT degree, April 2007
    c. Winston-Salem State University — MPT degree

## 3. ENROLLMENT

It is anticipated that enrollment in WCU's DPT program will all be fulltime (no part-time) and that the program will accept 24 students in the first cohort, increasing class size to 32 students in each cohort over the next three years. Enrollment figures:

1. First year of operation: 56 students enrolled fulltime (32 second-year MPT students and 24 first-year DPT students)
2. Fully operational: 96 students enrolled fulltime (32 DPT students in each of three cohorts)

## 4. DEMAND FOR GRADUATES

Statistics from the U.S. Department of Labor, Bureau of Labor Statistics, *Occupational Outlook Handbook 2008-2009* indicate that "employment of physical therapists is expected to grow 27 percent from 2006 to 2016, much faster than the average for all occupations." One stated reason for the increase is the "growing elderly population [that] is particularly vulnerable to chronic and debilitating conditions that require therapeutic services." Also, the baby-boom generation is entering the prime age for heart attacks and strokes, increasing the demand for cardiac and physical rehabilitation. The elderly are an especially important segment of the population for WCU's physical therapy program since "western North Carolina's population is aging faster than the rest of the state with 36 percent of the population over Age 50" (Huskins, 2008). Other reasons for anticipated growth in physical therapy employment opportunities include improved technology that is extending the lives of high-risk infants and victims of trauma; and widespread interest in health promotion and prevention of work-related injuries.

The President's Council of Economic Advisors, in its report, *Preparing the Workers of Today for the Jobs of Tomorrow*, states that health care "dominates" the list of industries that are projected to add the most jobs during 2008-2016 and that occupations like physical therapy will grow in importance especially in the care of the elderly.

The *North Carolina Hospital Workforce Trends Analysis, 2004-2006* (published July 2008) summarizes data collected annually by the North Carolina Hospital Association. The report states that the rapid growth in health care jobs is likely related to several interrelated, complex factors. These include changing demographics (such as the in-migration of an older population into certain "retirement destinations" in the state), the use of new medical

technologies often requiring specialized healthcare workers, and most importantly, increasing health care utilization.

- One way to assess whether hospitals are facing tight labor markets in certain health professions is to examine the use of contract and supplemental staff to fill budgeted positions for which permanent staff cannot be found. Compared to the rate for all professions, the use of non-permanent (supplemental or contract) staff is relatively high in NC for four of the therapy professions: 14 percent of physical therapists, 19 percent of physical therapist assistants, 19 percent of occupational therapist assistants and 22 percent of speech and language pathologists.
- Another measure of the difficulty hospitals face in recruiting health professionals is the number of days it takes to fill a position. The positions that take the longest to fill in NC are pharmacists (98 days), certified nurse anesthetists (88 days), and physical therapists (78 days).

**5. PLANS TO OFFER PROGRAM AWAY FROM CAMPUS –** not applicable

**6. PROCEDURES to PLAN PROPOSED PROGAM**

Accreditation of physical therapist education programs is based on compliance with *Evaluative Criteria for Accreditation of Education Programs for the Preparation of Physical Therapists* regardless of the degree offered. WCU's physical therapy program was granted accreditation in October 2003 that extends until June 2014. Annual reports that are primarily demographic and biennial reports to assure that programs meet the current evaluative criteria are required. According to current procedures, if WCU transitions to a DPT program, the university is required to notify CAPTE of the program's change in degree status, but no further action is required.

A curriculum consultant who is nationally recognized for his expertise was employed to assist with the development of a DPT curriculum. Planning for the transition from an MPT to a DPT degree program will be continued by the faculty of the Department of Physical Therapy working closely with the Provost, the Dean of the College of Health and Human Sciences, and the Dean of Research and Graduate Studies. The Physical Therapy Advisory Committee (with representation from numerous constituencies, including hospital administrators, practicing physical therapists, alumni, consumers of physical therapy, and university faculty from other disciplines) guided the department's decision to request authorization to plan a DPT program and will continue to be integrally involved as the planning proceeds.

Faculty members will utilize various resources available through the APTA, including three key publications: *The Guide to Physical Therapist Practice*; *A Normative Model of Physical Therapist Professional Education, Version 2004;* and the *Plan in Support of the Professional Clinical Doctorate and the Postprofessional "Transition" Clinical Doctorate*. Personnel in APTA's Education Division and CAPTE are also excellent resources. A special interest group of academic administrators within the APTA conducts three national meetings each year and is an excellent venue for information and networking. Other physical therapy education programs are also a resource, including the public institutions in North Carolina. The planning process will be coordinated by:

Karen Y. Lunnen, PT, EdD
Associate Professor, Department Head
Department of Physical Therapy
312 Moore Building
Western Carolina University
Cullowhee, NC 28723
(828) 227-2191
klunnen@email.wcu.edu

## 6. METHOD OF FINANCING

Space in the new Health and Gerontology building (anticipated to open Fall 2011) was designed to accommodate the increased enrollment and curricular demands of the proposed DPT program. Additional faculty will be needed and allocations will be based on the Student Credit Hour Enrollment Funding Model as set forth by The University of North Carolina General Administration and other administrative considerations.

## References

American Physical Therapy Association (2000). *APTA Vision Statement 2020* (approved by the APTA House of Delegates, June 2000). Alexandria, VA: APTA.

American Physical Therapy Association (2003). *Guide to physical therapist practice*, 2nd ed. Alexandria, VA: APTA.

American Physical Therapy Association (2003). *Plan in support of the professional clinical doctorate and the postprofessional "transition" clinical doctorate.* Alexandria, VA: APTA.

American Physical Therapy Association (2004). *A normative model of physical therapist professional education: Version 2004*. Alexandria, VA: APTA.

Commission on Accreditation in Physical Therapy Education (2006). *Evaluative criteria for the accreditation of education programs for the preparation of physical therapists.* Alexandria, VA: APTA.

Executive Office of the President Council of Economic Advisers (July, 2009). *Preparing the workers of today for the jobs of tomorrow.* http://www.whitehouse.gov/administration/eop/cea/Jobs-of-the-Future/ (retrieved August 27, 2009).

Huskins, B. (August, 2008). *WCN Allied Health Forum*, Western Carolina University, Cullowhee, NC.

*North Carolina Hospital Workforce Trend Analysis, 2004-2006* (July 2008). Prepared for the North Carolina Hospital Association by the North Carolina Health Professions Data System at the Cecil G. Sheps Center for Health Services Research.

*Occupational Outlook Handbook: 2008-2009 Edition*. United States Department of Labor, Bureau of Labor Statistics. http://www.bls.gov/oco/ocos080.htm (retrieved August 27, 2009).

# APPENDIX

# ABBREVIATED RESUMES of CORE WCU PHYSICAL THERAPY FACULTY

# ABBREVIATED RESUME

**Karen Yundt Lunnen, PT, EdD** August 2009

**Title**: Associate Professor, Department Head

**Education:**

Wittenberg University, Springfield, OH (1967-1971); B.A. Biology

Duke University, Durham, NC (1971-1973); M.S. Physical Therapy

North Carolina State University, Raleigh, NC (1998-2001); EdD Adult and Community College Education (emphasis on Higher Education Administration)

**License:** Physical Therapy - North Carolina - #950

**Employment and Positions Held:**

1. Physical Therapy Clinical Experience (summary):
    a. 1973-74: Residential facility for individuals with severe/profound disabilities (under contract with United Cerebral Palsy of NY)
    b. 1980-81: Consultant to complete proposal Cardiac Rehabilitation program, Harris Regional Hospital, Sylva, NC
    c. 1978-82: Staff physical therapist, Harris Regional Hospital, Sylva, NC
    d. 1982-83: Consultant to establish and direct a physical therapy department, Highlands-Cashiers Hospital, Highlands, NC
    e. 1979-95: Physical therapy consultant for various public school districts in western North Carolina
    f. 1982-97: (part-time and fulltime) pediatric physical therapist with Developmental Evaluation Center, Cullowhee, NC

2. Higher Education Experience (summary):
    a. 1974-78 Assistant Professor, University of North Carolina – Chapel Hill
    b. 1995-96 Acting Department Head, Department of Physical Therapy, Western Carolina University (WCU), Cullowhee, NC
    c. 1996-2001 Academic Coordinator of Clinical Education, WCU
    d. 2001-present Department Head, WCU

**Peer-reviewed Publications:** (last 10 years)

Lunnen, K. Y. (1999). Physical therapy in the schools. In J. S. Tecklin (Ed.), *Pediatric physical therapy* (3rd ed., pp. 562-578). Philadelphia: Lippincott, Williams and Wilkins.

Lunnen, K. Y. (1999). Children with multiple disabilities. In S. K. Campbell (Ed.), *Decision making in pediatric neurologic physical therapy* (pp. 141-197). New York, NY: Churchill Livingstone.

Ogletree, B. T., Bull, J., Drew, R., & Lunnen, K**.** (2001). Team-based service delivery for children with disability: Practice options and guidelines for success. *Intervention in Schools and Clinics.*

Lunnen, K. Y., & Geddes, R. F. (2007). Physical therapy in the educational environment. In J. S. Tecklin (Ed.), *Pediatric physical therapy* (4th ed.). New York, NY: Churchill Livingstone.

**Peer-reviewed Presentations:** (last 10 years)

Wilson, L. E., Coulter, B., Mallory, J., Lunnen, K. & Williams, M. (1999, October). *Improving retention in higher education.* Paper presented at the meeting of The Academy for Educational Leadership, Allied Academies International Conference, Las Vegas, NV.

Lunnen, K. L. (2000, May). *Understanding traditional Cherokee medicine.* Looking to the Future, Learning from the Past: Facing the Challenge of Diversity in Higher and Adult Education, North Carolina State University, Raleigh, NC.

Lunnen, K. L. (2002, October). *Educating for professionalism*. North Carolina Physical Therapy Association, Greensboro, NC.

Eargle, L., Lunnen, K.Y., & McPherson, S. (2004, February). *Service-learning across the curriculum: Putting it all together*. Combined Sections Meeting, American Physical Therapy Association, Nashville, TN.

**Poster Presentations:**

Lunnen, K.Y., Clayton, K., Kennedy, J., Minor, J., Stokes, A. (2005, February). *Outcomes of home-based massage intervention for high risk infants and their families.* Combined Sections Meeting, American Physical Therapy Association, New Orleans, LA.

Allen, R., Knight, B., Seymour, E., & Lunnen, K. L. (2005, March 18). *Aquatic intervention for students with developmental disabilities: A service-learning project.* Carolina Clinical Education Consortium Conference, Elon, NC.

Lunnen, K. L., Pendry, A., Stargiotti, C., & Tabor, M. (2007, June). *Aquatic therapy for children with developmental disabilities in the public schools: A service-learning project in an entry-level physical therapy program.* World Confederation of Physical Therapy, VanCouver, British Columbia.

**Platform Presentations:**

Lunnen, K. L., Kramer, T., Ngyugen, M, O'Kelley, S. (2001, February). *Desirable attributes and abilities for physical therapists in today's workforce.* Combined Sections Meetings of APTA, San Antonio, TX.

Fell, D., Lunnen, K. (2005, June). *A multidisciplinary volunteer team addressing rehabilitation and medical needs of Chinese orphans with disabilities: A model for future*

*team organization.* PT 2005, Annual Conference and Exposition of the American Physical Therapy Association, Boston, MA.

**Membership in Scientific/Professional Honorary Societies**

Phi Kappa Phi, National Honor Society, North Carolina State University Chapter, inducted March 20, 2000.

American Physical Therapy Association (since 1971) – Sections on Pediatrics, Neurology, Education, and Administration/Policy

**Current Teaching Responsibilities in the Physical Therapy Program**

Pediatric content that is integrated throughout the physical therapy curriculum:

- PT 612, Physical Therapy Science II (pediatric manual muscle testing and therapeutic exercise)
- PT 651, Clinical Logic I (primarily normal motor development, physical therapy in educational environment)
- PT 613, Physical Therapy Science III (developmental testing)
- PT 652, Clinical Logic II (musculoskeletal conditions)
- PT 614, Physical Therapy Science IV (physical therapy management of musculoskeletal conditions)
- PT 653, Clinical Logic III (neuromuscular conditions)
- PT 615, Physical Therapy Science V (physical therapy management of neuromuscular conditions)

PT 693 - Research/service-learning course (2 semesters – 2 credits each)
PT 720 - Capstone course

**Current Teaching Responsibilities Outside the Department**

PT 665, *Physical Care and Management of Students with Severe/Profound Disabilities* (Summer) – for special education teachers and speech and language pathologists nationwide

# ABBREVIATED RESUME

**David Hudson, Ph.D., PT** August 2009

**Title**: Assistant Professor, Director, Human Movement Science Lab

**Education:**

Ithaca College, Ithaca, NY (1989); B.S. Physical Therapy

University of Delaware, Newark, DE (1998); M.S. Biomechanics

University of Delaware, Newark, DE (2004); Ph.D. Biomechanics and Movement Science

**License:** Physical Therapy - North Carolina - #11398

**Employment and Positions Held:**

3. Physical Therapy Clinical Experience (summary):

**University of Delaware Gait Analysis Laboratory (2001 – 2007)**

– Director

**Pro PT – MD and DE clinics - (2005 – 2007)**

Lower extremity consultant

**Physiotherapy Associates - (1993 – 2001)**

Clinical Director – (1993 – 1998)

*Lower extremi*

***A.I. DuPont Children's Hospital - Wilmington, DE (1999 – 2001)***

*Clinical Speci*

**American Physical Rehabilitation Network - Toledo, OH (1991 – 1993)**
Clinical director of two outpatient facilities
**Maine Medical Center - Portland, ME (1991)**
Staff therapist – Inpatient rehabilitation
**Albany Medical Center - Albany, NY (1989 – 1990)**
Staff therapist – acute and long-term rehabilitation.

4. Higher Education Experience (summary):

***University of Delaware – (2001 – 2004)***

*Instructor*

***University of Delaware – (2004 – 2007)***
*Assistant Professor – Department of Health, Nutrition, and Exercise Sciences*
*Graduate Faculty – Biomechanics and Movement Science*
***Western Carolina University – (2007 – present)***
*Assistant Professor – Physical Therapy Department*

**Peer-reviewed Publications:** (last 10 years)

Hudson D. A comparison of ultrasound to goniometric and inclinometer measurements of torsion in the tibia and femur. *Gait Posture.* 2008;28:708-710.

Hudson D, Royer T, Richards J. Bone mineral density of the proximal tibia relates to axial torsion in the lower limb. *Gait Posture.* 2007;26:446-451.

Henley J, Richards J, Hudson D, et al. Reliability of a clinical 5-segment foot model. In: Harris G, Smith P, Marks R, eds. *Foot Ankle Motion Analysis*. Boca Raton: CRC Press; 2007:Chapter 26 445-464.

Hudson D, Royer T, Richards J. Ultrasound measurements of torsions in the tibia and femur. *J Bone Joint Surg Am.* 2006;88:138-143.

Crenshaw SJ, Royer TD, Richards JG, Hudson DJ. Gait variability in people with multiple sclerosis. *Mult Scler.* 2006;12:613-619.

**Peer-reviewed Presentations:** (last 10 years)

**Poster Presentations:**

Hudson, D., The adult rotational profile. Presented at: the 13th Annual Meeting of Gait and Clinical Movement Analysis Society; April, 2008; Richmond, VA.

Royer T. and Hudson D. Effects of area selection choice on quantifying proximal tibia bone density. Presented at: the Annual Meeting of the American Society of Biomechanics; August, 2007; Palo Alto, CA.

*Kolar K, Hudson D, and Kaminski T. Dynamic plantar pressure distributions in subjects with ankle instability. Presented at: the 3rd International Ankle Symposium; September, 2006; Dublin, Ireland.*

*Hudson, D, Richards J. Prediction of the adult foot progression angle: A study of the rotational profile, Presented at: the National Meeting of the American College of Sports Medicine; June, 2006; Denver, CO.*

Hudson D, Royer T, Richards J. Torsions in the tibia and femur: an ultrasound and anatomical study. Presented at: the 9th Annual Meeting of Gait and Clinical Movement Analysis Society; April, 2004; Lexington, KY.

Richards J, Hudson D, Schyller J, and Miller F. Changes in heel and forefoot loading after gastrocnemius fascia lengthening. Presented at: the 7th Annual Meeting of Gait and Clinical Movement Analysis Society; April, 2002; Chattanooga, TN.

**Platform Presentations:**

*Morrison KE, Hudson, DJ, Kaminski TW. Assessment of center of pressure trajectory during a running gait in subjects with chronic ankle instability. Paper presented at: the national meeting of the American College of Sports Medicine; June 2008; Indianapolis, IN.*

Hudson D, Hudson K, and Richards J. Windmill vs. overhead throwing: A biomechanical comparison. Paper presented at: the national meeting of American College of Sports Medicine; June, 2007; New Orleans LA.

Fullenkamp A, Richards J, Adams A, Hudson, D. Dynamic knee axis alignment: A clinical comparison. Paper presented at: The 12the Annual meeting of Gait and Clinical Movement Analysis Society; April, 2007; Portland, OR.

*Kolar K, Hudson D, and Kaminski T, Analysis of running biomechanics in subjects with ankle instability. Paper presented at: the national meeting of the American College of Sports Medicine; July 2006; Denver, CO.*

*Hudson D, and Richards J. Axial torsion relates to subchondral bone density in the proximal tibia, Paper presented at: Combined meeting of the International Society of Biomechanics and American Society of Biomechanics; August, 2005; Cleveland, OH.*

*Fullenkamp A, Hudson D, Richards J, Clinical usefulness of four functional knee axis algorithms. Paper presented at: Combined meeting of the International Society of Biomechanics and American Society of Biomechanics; August, 2005; Cleveland, OH.*

*Crenshaw S, Hudson D, Richards J, Royer T. Daily changes in gait in subjects with multiple sclerosis. Paper presented at: the 10th Annual Meeting of the Gait and Clinical Movement Analysis Society; April, 2005; Portland, OR.*

*Henley J, Hudson D, Richards J, and Miller F. Reliability of a clinical 5-segment foot model. Paper presented at: the 9th Annual Meeting of the Gait and Clinical Movement Analysis Society; April, 2004; Lexington, KY.*

Hicks J, Hudson D, Richards J. Clinical determination of the hip joint center. Paper presented at: the 8th Annual meeting of the Gait and Clinical Movement Analysis Society; April, 2003; Wilmington, DE.

*Hudson D, and Richards J. Efficacy of plantar orthoses for controlling abnormal foot motion. Paper presented at: the Alfred I. DuPont Hospital for Children Annual Orthopedic Research Symposium; May 2001; Wilmington, DE.*

**Current Teaching Responsibilities in the Physical Therapy Program:**

- PT 623, Functional Anatomy I
- PT 624, Functional Anatomy II
- PT 693, Research (2 semesters – 2 credits each)

## ABBREVIATED RESUME

Sue L. McPherson, PhD August 2009

**Title**: Full Professor

**Education:**

Auburn University, Auburn, Alabama (1973-1975), Health/Physical Education
Georgia Southern University, Statesboro, Georgia (1975-1977), Health/Physical Education, B.S. Education
Georgia Southern University, Statesboro, Georgia (1977-1978) Health/Physical Education, M.Ed.
Louisiana State University, Baton Rouge, Louisiana (1980-1982; 1986-1987) Motor Development, Minor(s)- Developmental Psychology; Statistics, PhD.

**Employment and Positions Held:**

1987-1988 Assistant Professor, Division of Health Physical Education and Recreation, Mars Hill College, Mars Hill, North Carolina
1988-1991 Assistant Professor, Department of Health and Sport Sciences, University of Oklahoma, Norman, Oklahoma
1992-1996 Assistant Professor and Graduate Program Coordinator, 1996-1999 Associate Professor and Graduate Program Coordinator, Department of Health and Human Performance, WCU, Cullowhee, NC
1999-2003 Associate Professor, 2000-2001 Interim Head, 2003-Present Full Professor Department of Physical Therapy, WCU
Research Design and Statistical Consultant for College of Health and Human Sciences, 2008- present

**Peer-reviewed and/or Invited Publications: (last 10 years)**

**McPherson**, S. L. (1999). Expert-novice differences in performance skills and problem representations of youth and adults during tennis competition. *Research Quarterly for Exercise and Sport, 70,* 233-251.

**McPherson**, S. L. (1999). Tactical differences in problem representations and solutions in collegiate varsity and beginner women tennis players. *Research Quarterly for Exercise and Sport, 70,* 369-384.

French, K. E., & **McPherson, S.L.** (1999). *Adaptations in response selection processes used during sport competition with increasing age and expertise*. International Journal of Sport Psychology, 30, *173-193.*

***McPherson, S. L.*** *(2000) Expert-novice differences in planning strategies during collegiate singles tennis competition.* Journal of Sport and Exercise Psychology, 22, *39-62.*

Nielsen, T. M., & **McPherson, S. L.** (2001). Response selection and execution skills of professionals and novices during singles tennis competition. *Perceptual and Motor Skills, 93*, 541-555.

**McPherson, S. L.** (2001). Tactics: The neglected attribute of champions. In A. Papaioannou, M. Goudas, and Y. TheodorakisThrace (Eds.) *In the dawn of the new millennium* (pp. 351-353).. Italy: Chrisotdoulidi

**McPherson, S. L.**, & Bull, J. R. (2003). The effect of two different videotaped instructional models on motor and verbal behaviors of adults' lifting: A pilot study. Perceptual and Motor Skills, 97, 339-359.

**McPherson, S. L**., & Kernodle, M. W. (2003). Tactics the neglected attribute of champions: Problem representations and performance skills in tennis. In J. L. Starkes and K. A. Ericsson (Eds.) *Recent Advances in Research on Sport Expertise* (pp.137-167). Champaign, IL: Human Kinetics

French, K. E., & **McPherson, S. L.** (2004). Development of expertise in sport. In M. R. Weiss (Ed.), *Developmental Sport and Exercise Psychology: A Lifespan Perspective* (pp. 403-423). Morgantown, WV: Fitness Information Technology.

**McPherson, S. L.**, & Vickers, J. N. (2004). Cognitive issues in motor expertise. *International Journal of Sport and Exercise Psychology, 2*, 274-300.

**McPherson, S. L.**, & Kernodle, M. W. (2007). Mapping two new points on the tennis expertise continuum: Tactical skills of adult advanced beginners and entry-level professionals during competition. *Journal of Sports Sciences.* 25, 945-959.

Watson, T., **McPherson, S. L**., & Starr, K. A. (2008). The association of nutritional status and gender with cross-sectional area of the multifidus muscle in establishing normative data. *Journal of Manual and Manipulative Therapy, 16*(4), E93-E98

**McPherson, S. L.** (2008). Tactics: Using knowledge to enhance performance. In D. Farrow, J. Baker, & C. MacMahon (Eds.), *Developing Elite Sports Performers: Lessons from Theory and Practice.* London: Routledge.

**McPherson, S.**, & MacMahon, C. (2008). How baseball players prepare to bat: Tactical knowledge as a mediator of expert performance in baseball. *Journal of Sport and Exercise Psychology*, 30(6), 755-778.

MacMahon, C., & **McPherson, S. L.** (in press) Knowledge base as a mechanism for perceptual-cognitive tasks: Skill is in the details. *International Journal of Sport Psychology.*

**Peer–reviewed National Presentations and Abstract Publications (last 2 years):**

Schrodt, L., **McPherson, S.**, Palmer, C., Watson, D., Boles, K., Harris, J., Ohmann, G., & Wood, J. (2008). What can brief gait and balance physical performance measures tell us about more demanding task performance in community-dwelling older adults? Presented at the 2008 APTA Combined Sections Meeting , February, Nashville, TN. February. *Journal of Geriatric Physical Therapy, 30(3)*, 150.

Jagger, K.L., & **McPherson, S.L.** (2008). Combining motion analysis and motor learning to augment physical therapy education. Presented at National APTA Annual Conference, June, San Antonio, TX. *Physical Therapy*, 17253.

Watson T., **McPherson S.**, Wells C., & Coghill C. (2008). The relationship of multifidus CSA with age, gender, percent body fat, and BMI in healthy subjects. Presented at the APTA Combined Sections Meeting, Nashville, TN February. *Journal of Orthopaedic & Sports Physical Therapy, 38(1),* A31-A31.

**McPherson, S. L.**, MacMahon, C. (2009) Do players' problem representations regarding batting preparation reflect greater use of metacognitive and sport-specific strategies with more task-specific practice. Presented at North American Society for the Psychology of Sport and Physical Activity, June, Austin, TX. *Journal of Sport and Exercise Psychology, 31S,* 87.

**McPherson, S. L.**, MacMahon, C. (2009) Expertise differences in problem representations of umpires, players, and nonplayers regarding the ball/strike decision in baseball umpiring. Presented at North American Society for the Psychology of Sport and Physical Activity, June, Austin, TX. *Journal of Sport and Exercise Psychology, 31S, 87.*

Watson, T., **McPherson, S. L.**, Blankenship, J., & Lenk, L. Transversus abdominis muscle activation during functional tasks: Implications for the practitioner dealing with spinal stabilization. To be presented at American Academy of Orthopaedic Manual Physical Therapists, Washington, DC, October, 2009.

**Membership in Scientific/Professional Societies and Service:**

- North American Society for the Psychology of Sport and Physical Activity (NASPSPA); served as conference committee chair and reviewer of abstracts for motor development programs
- American Alliance of Health, Physical Education, Recreation, and Dance (AAHPERD), Chair Motor Development Academy, 2001-2004; served on several research consortium committees for conferences and grants
- International Society of Sport Psychology (ISSP)
- Peer reviewer of manuscripts submitted to top and mid tier scholarly journals in motor behavior (e.g. Research Quarterly for Exercise and Sport; Journal of Sport and Exercise Psychology)
- External reviewer of grants, data based chapters, conference presentations, tenure candidates and doctoral candidates

**Selected Honors and Awards:**

- Recipient of *Distinguished Dissertation Award* Louisiana State University Alumni Federation, March 1988.
- Named as *Research Consortium Fellow* of American Alliance of Health Physical Education Recreation and Dance, active fellow since January, 1994.
- *Cited as pioneer in field of motor behavior*- Cited in two articles (J. R. Thomas, 2001; K. A. Ericsson, 1999) Developed theory regarding knowledge base development and instruments to quantify verbal reports elicited during motor tasks.
- Invited by *Research Consortium* to deliver one of the two annual "*Scholar Lectures*" at AAHPERD national conference, April 2005.
- *Recipient of Faculty Scholar Award*, College of Applied Sciences, Western Carolina University, Cullowhee, NC, 2004-2005.

**Current Teaching Responsibilities in WCU Department of Physical Therapy**

- Fall 2002-present- PT 641 Scientific Inquiry I, PT 643 Scientific Inquiry III, PT 696 Topics in Physical Therapy
- Spring 2003- Present PT 642 Scientific Inquiry I, PT 644 Scientific Inquiry III, PT 696 Topics in Physical Therapy, PT 661 Motor Behavior

# ABBREVIATED RESUME

**Lori A. Schrodt, PT, PhD** August 2009

**Title**: Assistant Professor

**Education:**

Ithaca College, Ithaca, NY (1988-1992); B.S. Physical Therapy

University of North Carolina at Chapel Hill, Chapel Hill, NC (1997-2000); M.S. Human Movement Science (concentration in neuromuscular motor control)

University of North Carolina at Chapel Hill, Chapel Hill, NC (2000-2006); Ph.D. Human Movement Science (concentration in aging and neuromuscular motor control)

University of North Carolina Institute on Aging, Chapel Hill, NC (2002-2004), Predoctoral Fellow Carolina Program in Healthcare and Aging Research (funded by the National Institute on Aging award #T32-AG00272-02)

**License:** Physical Therapy - North Carolina - #5760

**Employment and Positions Held:**

5. Physical Therapy Clinical Experience (summary):
    a. 1992-1994: Staff physical therapist (full time), State University of New York Health Science Center at Syracuse, Syracuse, NY
    b. 1994-1996: Contract physical therapist (full time), various locations and healthcare settings throughout United States
    c. 1996-1998: Staff physical therapist (full time), Pettigrew Rehabilitation and Health Care Center, Durham, NC
    d. 1998-2000: Contract physical therapist (part time), various healthcare facilities throughout central North Carolina
    e. 1999-2001: Physical therapist (part time), Tender Loving Care / Staff Builders Home Health Care, Durham, NC
    f. 2000: Physical therapist, Interdisciplinary Geriatric Evaluation Clinic, University of North Carolina Hospital
    g. 2006-present: Consultant and pro-bono physical therapy services, Department of Physical Therapy Western Carolina University

6. Higher Education Experience (summary):
    a. 1999-2002: Teaching Assistant, Division of Physical Therapy, University of North Carolina at Chapel Hill
    b. 2001-2002: Teaching Assistant, Division of Physical Therapy, Duke University
    c. 2002: Adjunct Instructor, Division of Physical Therapy, Duke University

d. 2004-present: Assistant Professor, Department of Physical Therapy, Western Carolina University

**Peer-reviewed Journal Article Publications:** (last 10 years)

**Schrodt, L.,** Mercer, V.S. (2000). Dual-task performance of cognitive and balance tasks in older adults. *Issues on Aging, 23*, 3-6.

Yu, B., Queen, R.M., **Schrodt, L.A.** (2003). Effect of external marker sets on between-day reproducibility of knee kinematics and kinetics in stair climbing and level walking. *Research in Sports Medicine, 11*(4), 209-218.

**Schrodt, L.A.,** Mercer, V.S., Giuliani, C., Hartman, M. (2004). Characteristics of stepping over an obstacle in older adults under dual-task conditions. *Gait and Posture, 19*, 279-287.

Shubert, T.E., **Schrodt, L.A.**, Mercer, V.S., Busby-Whitehead, J., Giuliani, C.A. (2006). Are scores on balance screening tests associated with mobility in older adults? *Journal of Geriatric Physical Therapy, 29*(1), 33-39.

Giuliani, C.A., Gruber-Baldini, A.L., Parks, N.S., **Schrodt, L.A.,** Zabolitzki, F., Sloane, P.D., Zimmerman, S. (2008). Physical performance characteristics of assisted living residents and risk for adverse health outcomes. *The Gerontologist, 48*(2), 203-212.

**Peer-reviewed Presentations:** (last 10 years)

**Platform Presentations :**

Giuliani, C., **Schrodt, L.,** Zimmerman, S., Park, N., Sloane, P., Zabolitzki, F., Gruber-Baldini, A. (2004, November). *Physical performance tests to identify assisted living residents who are at risk for adverse health outcomes.* Platform presentation at the Annual Scientific Meeting of the Gerontological Society of America, Washington, DC.

Schrodt, L.A., Giuliani, C.A., Freburger, J.K., Mercer, V.M., Hartman, M., Busby-Whitehead, J., (2008, February) *Are early assessments of older adults' cognitive processing predictive of declines in physical function and increased disability a year later?* Platform presentation at the Combined Sections Meeting of the American Physical Therapy Association, Nashville, TN.

**Poster Presentations:** (selected presentations only)

**Schrodt, L.,** Mercer, V.S., Giuliani, C., Hartman, M. (2001, February). *Characteristics of stepping over an obstacle in older adults under dual-task conditions.* Poster presented at the Combined Sections Meeting of the American Physical Therapy Association, San Antonio, TX.

**Schrodt, L.,** Giuliani, C., Hartman, M. (2002, November). *Function and disability in older*

*adults in public housing.* Poster presented at the Annual Scientific Meeting of the Gerontological Society of America, Boston, MA.

Giuliani, C.A., Zabolitzki, F.S., **Schrodt, L.A.,** Shubert, T.E., Hunter, R.H (2003, November). *Is grip strength a good indicator of performance on physical mobility measures?* Poster presented at the Annual Scientific Meeting of the Gerontological Society of America, San Diego, CA.

Shubert, T.E., Zabolitzki, F.S., **Schrodt, L.A.,** Hunter, R.H., Giuliani, C.A. (2003, November). *How are measurements of static and dynamic balance associated with performance on functional mobility assessments?* Poster presented at the Annual Scientific Meeting of the Gerontological Society of America, San Diego, CA.

**Schrodt, L.A.,** Zabolitzki, F.S., Shubert, T.E., Hunter, R.H., Giuliani, C.A. (2003, November). *Relationships between attention, processing speed, balance, and physical performance in older adults.* Poster presented at the Annual Scientific Meeting of the Gerontological Society of America, San Diego, CA.

**Schrodt, L.,** Giuliani, C., Busby-Whitehead, J. (2004, February). *Relationship of the Symbol Digit Modalities Test and Trail Making Test to physical function in older adults.* Poster presented at the Combined Sections Meeting of the American Physical Therapy Association, Nashville, TN.

**Schrodt, L.,** Giuliani, C., Freburger, J., Hartman, M., Mercer, V., Busby-Whitehead, J. (2004, November). *Direct and indirect effects of attention and processing speed on disability in older adults*. Poster presented at the Annual Scientific Meeting of the Gerontological Society of America, Washington, DC.

**Schrodt, L.,** McPherson, S., Crowe, A., Martin, W. (2006, February). *Does participation in a wellness screening program promote physical activity modifications in community dwelling older adults?* Poster presented at the Combined Sections Meeting of the American Physical Therapy Association, San Diego, CA.

**Schrodt, L.A.,** Giuliani, C.A., Freburger, J.K., Hartman, M., Mercer, V.S., Busby-Whitehead, J. (2007, February) *Direct and indirect effects of cognitive processing and physical function on disability in older adults.* Poster presented at the Combined Sections Meeting of the American Physical Therapy Association, Boston, MA.

**Schrodt, L.,** McPherson, S., Palmer, C., Watson, D., Boles, K., Harris, J., Ohmann, G., Wood, J. (2008, February) *What can brief gait and balance physical performance measures tell us about more demanding task performance in community-dwelling older adults?* Poster presented at the Combined Sections Meeting of the American Physical Therapy Association, Nashville, TN.

**Schrodt, L**., Mock, K., Smith, C., Malanga, B., Bernard, J. (2009, February) *Comparison of balance, mobility, balance confidence, and fall history between older women with and without*

*osteoporosis.* Poster presented at the Combined Sections Meeting of the American Physical Therapy Association, Las Vegas, NV.

**Grants Funded**

Mercer, V.S. (PI), **Schrodt, L.A. (WCU Site PI and Physical Therapy Coordinator).** Community Health and Mobility Partnership. Funded by The Baxter International Foundation via UNC-Chapel Hill, WCU Site Funding: $11,203. 2009-2012.

**Membership in Scientific/Professional Societies**

American Physical Therapy Association, 1992-present
Sections on Geriatrics and Neurology
Gerontological Society of America, 1999-present
American Geriatrics Society, 2001-2005
International Society for Aging and Physical Activity, 2009-present

**Current Teaching Responsibilities in WCU Department of Physical Therapy**

PT 611 – Physical Therapy Science I (3 hrs)
PT 660 – Neuroscience (2 hrs)
PT 653 – Clinical Logic III (neuromuscular rehabilitation, 4 hrs)
PT 615 – Physical Therapy Science V (neuromuscular rehabilitation, 3 hrs)
PT 693 – Research/service-learning project (2 semesters, 2 hrs each)

**Current Teaching Responsibilities Outside of Department**

PT 620 – Promoting Optimal Physical Function in Older Adults (3 hrs, web-enhanced, taught in even-numbered years)

# ABBREVIATED RESUME

**KATHY A. STARR, PH.D.** August 2009

**Title**: Associate Professor

**Education:**

Florida State University, Tallahassee, FL (1969-1973); B.A. Biology

Western Carolina University, Cullowhee, NC (1984-1986); M.S. Biology

Albany Medical College, Albany, NY (1986-1991); M. S., Ph.D. Anatomy

Post Doctoral Fellow, (1991-1993); New York State Department of Health, Albany, NY

**Employment and Positions Held:**

7. 1974-1976: Medical Technologist, University of Florida Student Health Services, Gainesville, FL
8. 1976-1980: Medical Technologist, North Florida Regional Hospital, Gainesville, FL
9. 1980-1982: Medical Technologist, Veteran's Administration Hospital, Denver, CO
10. 1982-1984: Medical Technologist, North Florida Regional Hospital, Gainesville, FL
11. 1993-1996: Science Instructor, Southwestern Community College, Sylva, NC
12. 1996-Present: Associate Professor, Physical Therapy Department,Western Carolina University, Cullowhee, NC

**Peer-reviewed Publications:** (last 10 years)

Starr, K. A. Service-Learning in a Clinical Curriculum: A Case Study. *Mountain Rise,* Vol 2(2), Spring/Summer, 2005.

Watson, T., McPherson, S., and K. Starr. The Association of Nutritional Status and Gender with Cross-Sectional Area of the Multifidus Muscle in Establishing Normative Data. Journal of Manual and Manipulative Therapy 16(4): e93-e98, 2008.

**Peer-reviewed Presentations:** (last 10 years)

Starr, K. A. Physical therapy students use cadaver dissections to teach basic anatomy to students in a physical therapist assistant program, 14th Annual International Human Anatomy & Physiology Society Conference, June 2000, Charlotte, North Carolina.

Starr, K. A. Using verbal reports to determine how students recall information from cadaver dissections. Experimental Biology 2001, April 2001, Orlando, Florida.

Starr, K. A. Student's depth of recall for muscles and their functions. Experimental Biology 2002, April 2002, New Orleans, Louisiana.

Starr, K. A. Making Dissection a More Positive Experience: A Student-Centered Approach. 17th Annual International Human Anatomy and Physiology Society, May 31-June 5, 2003, Philadelphia, Pennsylvania.

Starr, K. A. Digital Movies: Instructional Tools for the 21st Century. 17th Annual International Human Anatomy and Physiology Society, May 31-June 5, 2003, Philadelphia, Pennsylvania.

Starr, K. A., D. Brown, M. Bunge, and A. Mirovsky. Expanding PTA anatomy knowledge through the use of cadaver lab: a service-learning project. 15th Annual Carolinas Clinical Education Consortium Conference. April 2004, Sylva, North Carolina.

Bunge, M., D. Brown, A. Mirovsky, and K.A. Starr. Enhancing a physical therapist assistant anatomy curriculum with cadaver dissections: a service-learning project. 2005 Combined Section Meeting of the American Physical Therapy Association. February 2005, New Orleans, Louisiana.

Starr, K. A. Reducing Physical Therapy Students' Anxieties about the Anatomy Lab, WCU Scholarship of Teaching and Learning (SoTL) Faire. February 2005, Cullowhee, North Carolina.

Starr, K. A. Preparing Physical Therapy Students for Cadaver Dissection: Will it make a Difference? 19th Annual International Human Anatomy and Physiology Society Conference, May 2005, Saint Louis, Missouri.

Starr, K.A. Reflections on Dissection: A Qualitative Study of Physical Therapy Students' Responses to Working with Cadavers. 20th Annual International Human Anatomy and Physiology Society Conference, May 2006, Austin, Texas.

Starr, K.A. Impact of Memorializing Body Donors at the End of an Anatomy Course. 21st Annual International Human Anatomy and Physiology Society Conference, May 2007, San Diego, California.

Starr, K.A. Reactions to Cadaver dissection in a Physical Therapy Anatomy Course. 23rd Annual International Human Anatomy and Physiology Society Conference, May 2009, Baltimore Maryland.

Starr, K.A. Does Collaborative Group Testing Improve Performance? 23rd Annual International Human Anatomy and Physiology Society Conference, May 2009, Baltimore, Maryland.

**Membership in Scientific/Professional Honorary Societies**

American Association of Anatomists
Human Anatomy and Physiology Society

**Current Teaching Responsibilities in WCU Department of Physical Therapy**

- PT 621, Human Anatomy I
- PT 622, Human Anatomy II
- PT 631, Human Physiology I
- PT 632, Human Physiology II
- PT 693 - Research/service-learning course (2 semesters – 2 credits each)

# ABBREVIATED RESUME

**Todd Watson, PT, DPT, OCS, FAAOMPT** August 2009

**Title**: Associate Professor

**Education:**

Idaho State University, Pocatello (1984-1989); B.S. Zoology

Idaho State University, Pocatello (1989-1991); M.P.T Physical Therapy

University of St. Augustine for Health Sciences, St. Augustine, FL (1997-2000); D.P.T. Clinical Residency Physical Therapy (emphasis on Orthopaedic Manual Physical Therapy)

**License:** Physical Therapy - North Carolina - #7917; Florida - #7487

**Specialty Credentialing:**

MTC-Manual Therapy Certification through the University of St. Augustine (1999)

FAAOMPT-Fellow of the American Academy of Orthopaedic Manual Physical Therapists (1999)

OCS-Board Certified Clinical Specialist in Orthopaedic Physical Therapy. Diplomat, American Board of Physical Therapy Specialties. (1999, 2009)

Certificate of Clinical Research Conduct, Wake Forest University Baptist Medical Center (2000); Western Carolina University (2008)

**Employment and Positions Held:**

1. Physical Therapy Clinical Experience (summary):
    a. 1991-1993 Staff Physical Therapist, NovaCare, Port Charlotte, FL
    b. 1993-1994 Senior Physical Therapist, D&M Investments, Bogalusa, LA
    c. 1994-1999 Director of Clinical Services, American Physical Therapy, Port Charlotte, FL
    d. 1998-1999 Orthopaedic Manual Physical Therapy Residency, Flagler Hospital & University of St. Augustine, St. Augustine, FL
    e. 2001-2006 Staff Physical Therapist (PRN) Wake Forest University Baptist Medical Center Spine Center/Sports Medicine Center, Winston-Salem, NC
    f. 2006-Present Staff Physical Therapist (PRN) CarePartners West Outpatient Clinic Candler, NC

2. Higher Education Experience (summary):
    a. 1999-2002 Assistant Professor, Winston-Salem State University, Winston-Salem, NC
    b. 2002-2006 Assistant Professor, Western Carolina University, Cullowhee, NC
    c. 2006-Present Associate Professor, Western Carolina University, Cullowhee, NC

**Peer-reviewed Publications:** (last 5 years)

Watson, T, & Mock V. (2004). Update: Exercise and cancer-related fatigue. *Physical Therapy 84*(8), 736-743.

Irwin, R., Watson, T., Minick, R.P., Ambrosius, W. (2007). **Age, body mass index and gender differences in sacroiliac joint pathology.** ***American Journal of Physical Medicine and Rehabilitation.*** *86*(1):37-44.

Watson, T., McPherson, S., Starr, K. (2008). The association of nutritional status and gender with cross-sectional area of the multifundus muscle in establishing normative data. *Journal of Manual Manipulative Therapy*. 16 (4): E93-98.

Myers, J., Shanks, G., Watson, T., Hudson, D. G. Single Inclinometer vs. Double Inclinometer Measures of Lumbar Spine Range of Motion: A Validity Study. *To appear in Orthopaedic Physical Therapy Practice, 21*(3).

**Peer-reviewed Presentations:** (last 5 years)

Watson, T., & McCune, D., (October 2004). *Training sessions for lumbopelvic dysfunction using real-time ultrasound*. Louisville, KY: AAOMPT Annual Conference.

Echols, L., Grbavac, K., Shepherd, C., Walkerwicz, J., Arsenault, P., McPherson, S., Watson, T., (February 2005). *Service-learning implementation of a plyometric training program for ACL injury prevention: WCU women's basketball team.* New Orleans, LA: APTA Combined Sections Meeting.

Watson, T., Irwin, R., & Minick, R.P., (October 2005). *Age, gender and body mass index differences in the sacroiliac joint evidenced through a double block injection.* Salt Lake City, UT: AAOMPT Annual Conference.

Watson, T., Deyle, G., Teyhen, D., (June 2007). *Differential diagnosis and imaging for the physical therapist.* Denver, Co: APTA Annual Conference

Watson, T., McPherson, S., Wells, C., Coghill, C., (February 2008). *The relationship of multifidus muscle cross sectional area with age, gender, percent body fat, and BMI in healthy subjects.* Nashville, TN: APTA Combined Sections Meeting.

**Membership in Scientific/Professional Honorary Societies:**

Fellow – American Academy of Orthopaedic Manual Physical Therapists
Member – American Physical Therapy Association, Orthopedic Section

**Current Teaching Responsibilities in WCU Department of Physical Therapy**

PT 612 PT Sciences II – Spring 2003-09; Primary Instructor
PT 652 Clinical Logic II - Fall 2002-09; Primary Instructor
PT 614 PT Sciences IV - Fall 2002-09; Primary Instructor
PT 643 Special Topics – Fall 2002-09; Primary & Co-instructor

# ABBREVIATED RESUME

**Elisa M Zuber, PT, PhD** **August 2009**

**Title**: Assistant Professor, Academic Coordinator of Clinical Education

**Education**: Virginia Commonwealth University, Richmond, VA (1977-1979); BS, Physical Therapy

Radford University, Radford, VA (1987-1990); MS, Education (emphasis in Curriculum and Instruction)

University of Central Arkansas, Conway, AR (2000-2005); PhD, Physical Therapy

**License**: Physical Therapy – Arkansas - #PT1407

**Employment and Positions Held**:

1. Physical Therapy Clinical Experience (summary):
   Staff physical therapist at these hospitals between 1979 and 1991
   Provided direct patient care in acute care setting
   Served as clinical instructor for physical therapy students
   a. September 1979 - August 1980
      Norton-Children's Hospital
      Louisville, Kentucky
   b. September 1980 - March 1983
      Medical University of South Carolina Hospital
      Charleston, South Carolina
   c. April 1983 - May 1991
      Bluefield Community Hospital
      Bluefield, West Virginia
   d. August 1991-November 1992
      Shands Hospital at the University of Florida
      Gainesville, Florida

2. Higher Education Experience (summary):
   a. September 1985 - July 1987
      Wytheville Community College
      Wytheville, Virginia
      Instructor and Director, Physical Therapist Assistant Program
   b. August 1987 - August 1991
      College of Health Sciences
      Roanoke, Virginia
      Assistant Professor and Director, Physical Therapist Assistant Program

c. November 1992 - March 1997
University of Central Arkansas
Conway, Arkansas
Instructor, Department of Physical Therapy

d. March 1997 – September 2008
American Physical Therapy Association
Alexandria, Virginia
Associate Director, Department of Accreditation

e. September 2007 – May 2008
The George Washington University
Washington, DC
Adjunct Faculty, Department of Clinical Management and Leadership

f. August 2008 – May 2009
Virginia Commonwealth University
Richmond, VA
Adjunct Faculty, Department of Physical Therapy

g. November 2008 – Present
Western Carolina University
Cullowhee, NC
Assistant Professor and Academic Coordinator of Clinical Education, Department of Physical Therapy

**Peer-reviewed Publications:** (last 5 years)

Curtis, KA, Newman, PD, Zuber, EM. The PTA Handbook: Keys to Success in School and Career for the Physical Therapist Assistant. Thorofare, NJ: Slack, Incorporated. (Second edition in progress).

**Peer-reviewed Presentations:** (last 5 years)

Zuber, E, D'Orazio, B, Lovelace-Chandler, V (2009, February). Physical Therapist Assistant or Physical Therapist Substitute: Using Real Cases to Clarify the PTA's Role. Combined Sections Meeting, American Physical Therapy Association, Las Vegas, NV.

Maring, J, Costello, E, Zuber, E. Accreditation Processes and PTA Program Graduate Pass Rates (2009, February). Combined Sections Meeting, American Physical Therapy Association, Las Vegas, NV.

**Membership in Scientific/Professional Honorary Societies**

Phi Kappa Phi, National Honor Society, Radford University Chapter, inducted April 1989.
American Physical Therapy Association

**Current Teaching Responsibilities in WCU Department of Physical Therapy**

PT 683, Experiential Clinical Activities I
PT 684, Experiential Clinical Activities II
PT 783, Experiential Clinical Activities III
PT 784, Experiential Clinical Activities IV
PT 693, Topics in Physical Therapy