

Kathy L. Kern

University of Michigan School of Kinesiology
830 N. University,
Ann Arbor, Michigan 48109 USA

Education	
2012	University of Michigan School of Kinesiology – Master of Science ♦ Major: Movement Science – Concentration: Motor Control
2009	University of Michigan School of Kinesiology – Bachelor of Science ♦ Major: Movement Science
2006	Oakland Community College (OCC) – Associate - General Studies ♦ Major: Exercise Science; Honors Graduate, <i>Summa Cum Laude</i>
Academic Appointments	
2018-Present	Lecturer IV, School of Kinesiology , University of Michigan, Movement Science & Applied Exercise Science Programs
2014-2017	Lecturer III, School of Kinesiology , University of Michigan, Movement Science & Health & Fitness Programs
2012-2014	Lecturer I, School of Kinesiology , University of Michigan, Movement Science & Health & Fitness Programs
2017-Present	Faculty Internship Mentor , University of Michigan, Movement Science, Undergrad & Grad, Applied Exercise Science Programs. MVS390, MVS403, AES290, AES403, KIN686
2014-2019	Conflict Resolution Officer for the School of Kinesiology , Office of Student Conflict Resolution, Appointed by the Dean
2013-2016	Academic Advisor, School of Kinesiology Advising Pre-Health & Health & Fitness Program
Teaching	
<u>HF/AES332</u> W2018 – W2021	Principles of Motor Behavior – Upper level course in motor behavior. Developed in 2018. University of Michigan School of Kinesiology
<u>HF/AES331</u> F2013 – F2020	Biomechanics of Sport – Upper-level course in applied biomechanics. Developed in 2013. University of Michigan School of Kinesiology
<u>MVS110</u> F2012 – W2020	Biological and Behavioral Bases for Human Movement – Introductory course in the disciplines of Motor Control, Biomechanics and Exercise Physiology. Taught all components. Revised in 2012. University of Michigan School of Kinesiology
<u>HF242</u> W2014 - W2017	Essentials of Exercise Physiology – Upper level course in the physiological adaptations to exercise. Revised in 2014. University of Michigan School of Kinesiology
<u>MVS320 (Lab)</u> W2012 – W2022	Motor Control – Upper-level hands-on research course examining neurological and behavioral aspects of movement. Revised in 2012. University of Michigan School of Kinesiology
<u>MVS330 (Lab)</u> W2017	Biomechanics – Upper-level hands-on research course examining the forces that contribute to human movement. University of Michigan School of Kinesiology
Additional Experience	
<u>AES100</u> Guest Lecture F2019-Present	Introduction to Applied Exercise Science – Introductory course examining the field of exercise science

<u>KIN402</u>	Master's Level Teaching Experience – Mentored teaching experience in biomechanics, both freshman and junior level courses.
<u>MVS488</u>	Independent Study – Mentored senior level examination of the current lower limb prosthetic technology, including consumer viability.
<u>HF470</u>	Independent Study – Directed several senior level studies at the University of Michigan School of Kinesiology delving into the following: <ol style="list-style-type: none"> 1. In depth examination of breathing techniques during specific exercises 2. Creation of Strength & Conditioning training protocols for Olympic weightlifting & CrossFit 3. Creation of a Worksite Wellness program in an industrial setting
<u>KIN511</u> Guest Lecturer	Physical Activity Behavior: Social Factors – Upper level course examining the socioeconomic factors of physical activity. University of Michigan School of Kinesiology
<u>BIO109</u> Asst Instructor	Physiology and Anatomy – Introductory lecture and lab course. Washtenaw Community College.
<u>KIN415</u>	Directed Teaching in Physical Education – Created an innovative rubric for students to complete teacher evaluations – University of Michigan School of Kinesiology.
<u>Study Group Leader</u> 2009-2014	Study Group Leader & Program Developer – As an undergrad I created the first sanctioned study group for the School of Kinesiology. Study Groups Led at Oakland Community College – Advanced Algebra, Trigonometry & Geology.
Advisor to Student Groups and Organizations	
2015 - 2022	Figure Skating Club at the University of Michigan
University Committees	
2019	Applied Exercise Science – Search Committee
2015-Present	Schoolcraft Community College - Advisory Committee for the Fitness Leadership programs
2016-2018	Health & Fitness Curriculum Review Committee - University of Michigan School of Kinesiology
2016-2018	Curriculum Instruction Committee (CIC) - University of Michigan School of Kinesiology
Administrative	
2014-Present	Faculty Internship Mentor Applied Exercise Science & Movement Science Programs Grad and Undergrad - University of Michigan School of Kinesiology.
2013-2018	Health & Fitness program Coordinator University of Michigan School of Kinesiology.
2014-2022	Student Study Group Leader Administrator , University of Michigan School of Kinesiology.
Awards & Grants	
2015, 2018 & 2020	Teaching Excellence Award - University of Michigan School of Kinesiology
2012	Awarded Graduate Student Instructor Assistantship , School of Kinesiology, University of Michigan, Movement Science Department.

Certifications	
2016-Present	American College of Sports Medicine: Certified Personal Trainer CPT
In progress	American College of Sports Medicine: ACSM/NCHPAD Certified Inclusive Fitness Trainer
Research	
2014 - 2018	Research Associate, Human Performance Innovation Laboratory - University of Michigan School of Kinesiology. Examining the effects of exercise on balance in an older population. Past research: Examining the biomechanical health risks of obesity, examining foot morphology during running
2009 - 2017	Research Associate, Motor Control Laboratory - University of Michigan School of Kinesiology. Examining innovative devices and techniques in upper extremity rehabilitation for individuals with central and peripheral neurological disorders. Additionally examining the effects of aging on hand and arm function.
2010 - 2012	Masters-level research project ; Reviewed upper limb assessment techniques.
2007 - 2010	Undergraduate Research Assistant - Collected and analyzed data associated with an upper limb intervention for adults with cerebral palsy and children with brachial plexus palsy.
Publications & Presentations	
<i>Peer-Reviewed Publications</i>	<p>Logue R., Kern K.L., Brown S. B. (2024 In Press) Effectiveness of a Home Training Program on Improving Pinch Force Perception in Older Adults HANDTHE-D-23-00090R1</p> <p>Hafer J. F., Provenzano S.G., Kern K. L., Agresta C.E., Grant J.A., Zernicke R.F., (2020) Measuring markers of aging and knee osteoarthritis gait using inertial measurement units. <i>Journal of Biomechanics</i>. 10.1016/j.jbiomech.2019.109567</p> <p>Brown, S. H., Wernimont, C.W., Phillips, L.J., Kern, K.L., Yang, L. J-S., Nelson, V.S (2016) Hand sensorimotor function in older children with neonatal brachial plexus palsy. <i>Pediatric Neurology</i> 56, 42-47.</p> <p>Langan, J., Kern, K.L., Hurvitz, E.A, Brown, S.H. (2014) Upper limb position sense deficits in adults with cerebral palsy. <i>American Journal of Physical Medicine & Rehabilitation</i> 93 (9), 774-781.</p> <p>Brown, S.H., Langan, J., Kern, K.L., Hurvitz, E.A. (2011). Remote monitoring and quantification of upper limb and hand function in chronic disability conditions, <i>International Journal of Disability and Human Development</i> 10 (4).</p>
<i>Abstracts</i>	<p>Wernimont C.W., Phillips L., Yang L.J., Kern K.L., Brown S. H. Somatosensory Deficits in Children with Neonatal Brachial Plexus Palsy. Association of Academic Physiatrists. Annual Meeting 2012, Abstract ID: ESA-1707-09-10-2012.</p> <p>Langan, J., Kern, K., Hurvitz, E., Brown, SH. Improvement in proprioceptive function following upper limb sensorimotor training. Amer Congress Rehab Medicine 2010</p> <p>Brown, S.H., Langan, J., Kern, K.L., Hurvitz, E.A. Remote monitoring and quantification of upper limb and hand function in chronic disability conditions. 8th Int Conf Disability, Virtual Reality and Assoc Tech 2010</p> <p>Brown, SH., Doyle, ST, Kern, KL, Lewis, CA, Hurvitz, EA. Internet-based home training to improve upper limb coordination in adults with cerebral palsy. Soc. Neuroscience 2009</p>

<p><i>Conferences</i></p>	<p>Hafer J. F., Kern K. L., Provenzano S.G., Agresta C.E., Zernicke R.F., IMU-Derived metrics for aging and knee osteoarthritis gait. <u>International Society of Biomechanics/ASB 2019 Calgary</u></p> <p>K. Kern, L. Phillips, K. Chang, L. Yang, S. H. Brown, Improvement in Upper Limb Function Following Video Game Exercises in Children and Adolescents with Neonatal Brachial Plexus Palsy. <u>International Society of Physical and Rehabilitation Medicine (ISPRM) 2017</u></p> <p>Caminita, M., Hibino, H., Kern, K., Huang, M., Brown, SH. Effects of bilateral reach tasks on postural control in older adults. <u>Society for Neuroscience 2015</u></p> <p>Kern, K., Brown, S.H. Training-related improvements in hand force perception in older adults. <u>Society for Neuroscience 2014</u></p> <p>Aaron M.B., Bery A.B., Kern K.L., Brown S.B. Menstrual Cycle Phase Affects Upper Limb Position Sense in Young Women. <u>Society for Neuroscience 2013.</u></p> <p>Wernimont, C.W., Phillips, L.J., Kern, K.L., Yang, L. J-S., Nelson, V.S, Brown, S.H. Somatosensory deficits in children with neonatal brachial plexus palsy. <u>Amer Academy Physiatry March 2013</u></p> <p>Phillips L., Wernimont C., Nelson V., Yang L., Kern K., Brown S. Somatosensory Deficits in Children with Neonatal Brachial Plexus Palsy. <u>American Academy for Cerebral Palsy and Developmental Medicine 2013</u></p> <p>DeLave K. A., Langan J. M., Kern K. L., Brown S. H. The Effects of Task and Skill on Sequentially Produced Grasp Forces. <u>Society for Neuroscience 2012.</u></p> <p>Langan, J., Kern, K.L., Hurvitz, E., Brown, S.H. Improvement in proprioceptive function following upper limb sensorimotor training. <u>American Congress of Rehabilitation Medicine 2010.</u></p> <p>Brown, S.H., Langan, J., Kern, K.L., Hurvitz, E.A. Remote monitoring and quantification of upper limb and hand function in chronic disability conditions. <u>8th International Conference on Disability, Virtual Reality and Assoc Tech 2010.</u></p> <p>Langan, J., Kern, K.L., Hurvitz, E.A., Brown, S.H. Improved tactile and limb position sense in adults with cerebral palsy following upper limb sensorimotor training. <u>Society for Neuroscience 2010.</u></p>
<p><u>Professional Memberships</u></p>	
<p>2007 - Present 2011 - Present 2013 - Present</p>	<p>Society for Neuroscience Society of Clinical Research Associates American College of Sports Medicine</p>