

ALKA BISHNOI

CURRICULUM VITAE

Last updated August 2026

Email:

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School of Kinesiology, Department of Physical Therapy, Auburn University, KN-176, 301 Wire Road, Auburn, AL.

EDUCATION

Ph.D., Kinesiology and Community Health, University of Illinois at Urbana-Champaign, 2021. Dissertation: [Effects of heart rate reserve on instrumented trail walking in middle aged to older aged adults](#). *Area of Specialty:* Exploration of biomarkers of cognitive impairment while dual task walking in older adults using neuroimaging (fNIRS).

M.S., Rehabilitation Sciences (Neuroplasticity Concentration), University of Illinois, Chicago, 2017.

M.S., Exercise Physiology (Exercise Prescription Concentration), Kent State University, 2014.

B.S., Physical Therapy, University of Delhi, 2011.

ACADEMIC APPOINTMENTS

Assistant Professor (Tenure track Core Faculty), School of Kinesiology, Department of Physical Therapy, Auburn University, August 2026 – Present

Assistant Professor (Tenure track Core Faculty) & Research Content Coordinator, Department of Physical Therapy, Kean University, August 2025 – August 2026

Assistant Professor (Tenure track Core Faculty) & Cardiopulmonary Content Coordinator, Department of Physical Therapy, Kean University, September 2022 – August 2025

Visiting Postdoctoral Scholar, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign, January 2022 – August 2022

Course Instructor and Teaching Assistant, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign, August 2017 – December 2021

TEACHING INTERESTS

Biomechanics of human movement • Fall prevention • Gerontology • Motor behavior and

control • Exercise Physiology • Neurorehabilitation • Health Promotion and Wellness •
Research and Evidence Based Practice • Cardiopulmonary physiology • Neuroscience

RESEARCH APPOINTMENTS

- Early Career Editorial Board Member, *Brain Sciences* (MDPI), August 2025 – Present
- Guest Editor, *Sensors* (MDPI), August 2025 – Present
- Editorial Board Member, *BMC Neurology*, January 2026- Present
- Faculty Fellow, *National Science Foundation* (NSF) Build and Broaden, CY3, Kean University, August 2025 – August 2026
- Research Appointee, Motor Control Research Laboratory, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign, June 2017 – August 2017
- Research Lab Coordinator, Brain Plasticity Laboratory, Department of Physical Therapy, University of Illinois at Chicago, May 2016 – August 2016

RESEARCH INTERESTS

Dr. Alka Bishnoi's research examines the neural and functional consequences of cardiovascular risk factors on cognition and mobility in aging populations. Her work integrates functional near-infrared spectroscopy (fNIRS), cognitive assessment, and biomechanical gait analysis to elucidate the neural mechanisms underlying executive dysfunction and fall risk in older adults, with a particular focus on urban and underserved communities. She has published studies demonstrating associations between prefrontal cortical activation and functional performance during dual task walking and balance paradigms using combined neuroimaging and biomechanical approaches. Dr. Bishnoi's ongoing and future research aims to design and evaluate scalable, exercise-based interventions such as dual-task training to reduce cognitive and mobility decline in high-risk older adults.

MEDIA COVERAGE

- [Wearable Technology Continuously Monitors Heart-rate Recovery to Predict Risk, University of Illinois Urbana-Champaign News Bureau, April 9, 2025.](#)
- [Kean University Researcher Conducts Study on Osteoarthritis' Impact on the Brain, Kean University, October 6, 2025.](#)

BOOK CHAPTERS

1. **Bishnoi, A.** (2024). *Hypertension, Heart Rate Reserve, and Cognitive Impairment: Exploring Relationships, Implications, and Measurement Techniques*. In: Mittal, M.,

Narayan, J. (eds) Intelligent Cyber-Physical Systems for Healthcare Solutions. Springer, Singapore. https://doi.org/10.1007/978-981-97-8983-2_5.

2. **Bishnoi, A.**, Hernandez, M.E. (2025). *Association of Heart Rate Variability with Cardiovascular Disease Risk in Healthy Adults*. In: Narayan, J., Gritli, H. (eds) Design and Control of Rehabilitation Robots. Studies in Systems, Decision and Control, vol 585. Springer, Cham. https://doi.org/10.1007/978-3-031-86977-8_7.

PEER-REVIEWED JOURNAL PUBLICATIONS (* denotes students)

1. Enriquez CS, **Bishnoi A**, Oniyide M, Jennings K*, Luo R. *Anxiety as a psychological modulator of endogenous pain inhibition in chronic neck pain: Implications for precision rehabilitation*. Journal of Pain Research. 2026 ([Q1 Journal](#))
2. Saksham Singla*, Sheral Singla*, Karan Singla*, Priya Kansal*, Sachin Kansal*, **Alka Bishnoi**, Jyotindra Narayan. *NovAc-DL: Novel Activity Recognition Based on Deep Learning in the Real-Time Environment*. Big Data and Cognitive Computing. 2025 ([Q1 Journal](#))
3. **Alka Bishnoi**, Yang Hu, Manuel E. Hernandez. *Impact of Sensory Organization Tasks on Prefrontal Cortex Activity in Older Women: A Comparative fNIRS Study of Osteoarthritis and Healthy Aging*. Frontiers in Aging Neuroscience. 2025 ([Q1 Journal](#))
4. Ayse Dogan*, **Alka Bishnoi**, Richard B. Sowers, Manuel E. Hernandez. *Continuous Heart Rate Recovery Monitoring with ECG Signals from Wearables: Identifying Risk Groups in the General Population*. IEEE Journal of Biomedical and Health Informatics. 2025 ([Q1 Journal](#))
5. **Alka Bishnoi**, Manuel Hernandez. *Heart rate reserve effects on brain activation and cognitive motor performance while doing an instrumented trail walking task in middle-aged to older adults*. Archives of Gerontology and Geriatrics Plus. 2025 ([Q1 Journal](#))
6. Sadia Younis*, **Alka Bishnoi**, Jyotindra Narayan, and Renato Mio*. 2024. *Impact of Contralateral Hemiplegia on Lower Limb Joint Kinematics and Dynamics: A Musculoskeletal Modeling Approach*. Biomechanics. 2024 ([Q2 Journal](#))
7. **Alka Bishnoi**, Yang Hu, Manuel E. Hernandez. *Perturbation walking effects on prefrontal cortical activation and walking performance in older women with and without osteoarthritis: a FNIRS study*. Frontiers in Aging Neuroscience. 2024 ([Q1 Journal](#))
8. **Alka Bishnoi**, Manuel E. Hernandez. *Effects of Heart Rate Reserve on Prefrontal Cortical Activation and dual task walking while doing an instrumented trail walking task: an fNIRS study*. Frontiers in Cardiovascular Medicine (**Abstract accepted to: Heart-Brain Interactions: Role of Imaging Modalities**). 2023 ([Q1 Journal](#))
9. **Alka Bishnoi**, Meghna Shankar*, Rachel lee, Yang Hu, Manuel E. Hernandez. *Effect of therapeutic intervention on spatiotemporal gait parameters in older adults with and without neurological disorder: A systematic review and meta-analysis*. Archives of Physical Medicine and Rehabilitation. 2022 ([Q1 Journal](#))
10. **Alka Bishnoi**, Rachel lee*, Yang Hu, Manuel E. Hernandez. *Effect of treadmill intervention on spatiotemporal gait parameters in older adults with and without neurological disorders: A systematic review and meta-analysis*. International Journal of Environmental Research and Public Health. 2022 ([Q2 Journal](#))
11. **Alka Bishnoi**, Gioella N. Chaparro, Manuel E. Hernandez. *Effect of Heart Rate Reserve*

- on Prefrontal Cortical Activation while dual task walking in older adults*. International Journal of Environmental Research and Public Health. 2021 ([Q2 Journal](#))
12. **Alka Bishnoi**, Roe Holtzer, Manuel E. Hernandez. *Brain activation changes while walking in adults with and without neurological disease: Systematic Review and Meta-analysis of Functional Near-Infrared Spectroscopy studies*. Brain Sciences. 2021 ([Q2 Journal](#))
 13. **Alka Bishnoi**, Manuel E. Hernandez. *Dual task walking costs in older adults with Mild Cognitive Impairment: Systematic Review and Meta-Analysis*. Aging & Mental Health. 2020 ([Q1 Journal](#))
 14. Yang Hu, **Alka Bishnoi**, Rachneet Kaur, Richard Sowers, Manuel E. Hernandez. *Exploration of Machine Learning to Identify Community Dwelling Older Adults with Balance Dysfunction Using Short Duration Accelerometer Data*. *Paper at IEEE Engineering in Medicine and Biology Society (EMBC)*. 06/2020. DOI: 10.1109/EMBC44109.2020.9175871. ([Q1 Journal](#))
 15. Tablerion J., Wood T., Hsieh K., **Bishnoi A.**, Sun R., Hernandez M., An R., Sosnoff J. *Motor Learning in People with Multiple Sclerosis: A Systematic Review and Meta-Analysis*. Archives of Physical Medicine & Rehabilitation. 2019 ([Q1 Journal](#))
 16. Wood T., Moon Y., Sun R., **Bishnoi A.**, Sosnoff J. *Age Related Differences in Head Impact During Experimentally Induced Sideways Falls*. BioMed Research International. 2018 ([Q2 Journal](#))
 17. Yaejin Moon, **Alka Bishnoi**, Ruopeng Sun, Jong-Cheol Shin and Jacob J. Sosnoff. *Preliminary Investigation of Teaching Older Adults the Tuck-and-Roll Strategy: Can Older Adults Learn to Fall with Reduced Impact Severity*. Journal of Biomechanics. 2018 ([Q1 Journal](#))
 18. Madhavan S., **Bishnoi A.** *Comparison of the Mini-Best Evaluation Systems Test (Mini-BESTest) and Berg Balance Scale (BBS) in relationship with walking speed and motor recovery post stroke*. Topics in Stroke Rehabilitation. 2017 ([Q1 Journal](#))

PEER-REVIEWED FULL LENGTH CONFERENCE PROCEEDINGS. (* denotes students)

19. **A. Bishnoi**, T. Ikuta. *DLPFC Functional Connectivity and Fine Motor Performance: A Resting-State fMRI Study*. *Society of Neuroscience (SFN) Conference*, November 14-18, 2026, Washington, D.C.
20. Enriquez CS, **Bishnoi A**, Jennings K*, Luo R. *Neurophysiological Dysregulation and Psychosocial Constraints in the Prevention and Recovery of Chronic Neck Pain*. *59th Annual Scientific Meeting of the British Pain Society*, April 21-23, 2026, Harrogate, UK.
21. **Alka Bishnoi**, Manuel Hernandez. *Cognitive-Motor Interactions Post Concussion: A Systematic Review of Dual-Task Gait in Middle-Aged Adults*. *Society of Neuroscience (SFN)*, 2025.
22. **Alka Bishnoi**. *Impact of Increased Respiratory Load on Prefrontal Cortical Activation Under Varying Task Complexities of Trail Walking Task*. *Kean Conference*, 05/09/2025.
23. Hussnain Shakeel*, Declan Cioffi*, **Alka Bishnoi**. *Cognitive-Motor Interactions Post Concussion: A Systematic Review of Dual-Task Gait in Middle-Aged Adults*. *Kean Research Days*, 2025.

24. **Alka Bishnoi**, Hussnain Shakeel*, Declan Cioffi*, Manuel Hernandez. Cognitive-Motor Interactions Post Concussion: A Systematic Review of Dual-Task Gait in Middle-Aged Adults. *International Society of Posture & Gait Research (ISPGR)*. 2025.
25. **Alka Bishnoi**, Manuel Hernandez. Impact of increased respiratory load on prefrontal cortical activation under varying task complexities of trail walking task. *International Society of Posture & Gait Research (ISPGR)*. 2025.
26. **Alka Bishnoi**, Manuel Hernandez. Impact of increased respiratory load on prefrontal cortical activation under varying task complexities of trail walking task. *American Society of Biomechanics (ASB)*. 2025.
27. **Alka Bishnoi**, Manuel Hernandez. Clinical sensory organization task effects on prefrontal cortical activation patterns in older adults with and without hypertension. *Neural Control of Movement*. 2024
28. Juliana Lefano*, **Alka Bishnoi**, Manuel Hernandez. Association of Heart Rate Variability with Cardiovascular Disease risk in Healthy adults: Framingham Heart study. *Research Days, Kean University*. 2024
29. Juliana Lefano*, **Alka Bishnoi**, Manuel Hernandez. Association of Vascular Age and Age Dependent Maximum Heart Rate with Performance on the Mini-Balance Evaluation Systems Test Among Community Dwelling Adults. *Research Days, Kean University*. 2023
30. **Alka Bishnoi**, Manuel Hernandez. Gait variability association with prefrontal cortical activation among older adults with and without impaired heart rate reserve. *Society of Neuroscience*. 2022
31. Manuel Hernandez, **Alka Bishnoi**. Effect of hypertension on prefrontal cortical activation in older adults during instrumented trail walking tasks. *Gerontological society of America*. 2022
32. **Alka Bishnoi**, Manuel Hernandez. Effects of cardiovascular risk factors on prefrontal cortical activation while trail walking task: a dual task fNIRS study. *Society of Neuroscience*. 2021
33. Liran Ziegelman*, Abdulrahman Alkurdi, Yang Hu, **Alka Bishnoi**, Rachneet Kaur, Richard Sowers, Elizabeth T. Hsiao-Wecksler, Manuel Hernandez. Feasibility of VR Technology in Eliciting State Anxiety Changes While Walking in Older Women. *Conference: 2021 43rd Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC)*.
34. **Alka Bishnoi**, Yang Hu, Manuel E. Hernandez. Effect of perturbation on brain activation and walking performance in older adults with and without osteoarthritis. *Presentation at American Society of Biomechanics*. 2021
35. Yang Hu, Rachneet Kaur, **Alka Bishnoi**, Manuel E. Hernandez. Adaptive Control of Stride length in response to perturbations while walking in older women with osteoarthritis. *Poster at American Society of Biomechanics*. 2021
36. **Alka Bishnoi**, Rachel Lee, Yang Hu, Manuel E. Hernandez. Effect of treadmill intervention on spatiotemporal gait parameters in adults with and without neurological disorder. *Presentation at American Congress of Physical Medicine and Rehabilitation*. 2021
37. Meghna Shankar, **Alka Bishnoi**, Rachel Lee, Yang Hu, Manuel E. Hernandez. Effect of therapeutic intervention on spatiotemporal gait parameters in adults with and without neurological disorder. *Poster at American Congress of Physical Medicine and*

Rehabilitation. 2021

38. **Alka Bishnoi**, Yang Hu, Manuel E. Hernandez. Effect of gait variability on prefrontal cortical activation during normal walking among community dwelling older women. *Neural Control of Movement. 2021*
39. Yang Hu, **Alka Bishnoi**, Manuel E. Hernandez. Prefrontal Cortical Activation Patterns During Dual-Task Stepping in Older Women with and without Osteoarthritis. *Neural Control of Movement. 2021*
40. **Alka Bishnoi**, Yang Hu, Manuel E. Hernandez. Effect of clinical sensory organization test on prefrontal cortical activation among older women with and without osteoarthritis. *Poster presented at Society of Neuroscience, Global Connectome. 01/11-01/13/2021*
41. Manuel E. Hernandez, Yang Hu, **Alka Bishnoi**. Effect of Osteoarthritis on Prefrontal Cortical Activation Patterns During Downward Reaching in Older Women. *Poster presented at Gerontological Society of America. 12/2020*
42. **Alka Bishnoi**, Yang Hu, Manuel E. Hernandez. Effect of Osteoarthritis on Prefrontal Cortical Activation patterns during Dual Task Walking in Older Women. *Poster presented at American Congress of Rehabilitative Medicine, Virtual Conference. 10/21-10/24/2020*
43. **Alka Bishnoi**, Yang Hu, Manuel E. Hernandez. Effect of Anxiety Inducing Virtual Reality Environments on Prefrontal Cortical Activation patterns among Older Women with and without Osteoarthritis. *Poster presented at American Congress of Rehabilitative Medicine, Virtual Conference. 10/21-10/24/2020*
44. Yang Hu, **Alka Bishnoi**, Manuel E. Hernandez. Effect of Pain on the Cognitive Control of Balance during the Motor Control Test in Older Women with and without Osteoarthritis. *Podium Presentation presented at American Society of Biomechanics, Virtual Conference. 08/04-08/07/2020*
45. **A. Bishnoi**, M.E. Hernandez. Using Functional Near Infrared Spectroscopy to Determine Brain Activation Changes in Older Adults: Meta-analysis. *Poster presented at Cognitive Neuroscience Society, Virtual Conference. 03/16/2020*
46. **A. Bishnoi**, G. Chaparro, M.E. Hernandez. Effect of heart rate reserve on prefrontal cortical activation in healthy older adults while dual task walking. *Poster presented at Society of Neuroscience, Chicago, IL. 10/21/19*
47. L. Ziegelman, R. Sun, **A. Bishnoi**, Y. Hu, M.E. Hernandez. A neuromechanical model of continuous wrist motion. *Poster presented at Society of Neuroscience, Chicago, IL. 10/22/19*
48. Wood T., Moon Y., Sun R., **Bishnoi A.**, Sosnoff J. Age Related Differences in Head Impact During Experimentally Induced Sideways Falls. *Presentation at International/ American Society of Biomechanics. 07/31/2019*
49. Tablerion J., Wood T., Hsieh K., **Bishnoi A.**, Sun R., Hernandez M., An R., Sosnoff J. Motor Learning in People with Multiple Sclerosis: A Systematic Review and Meta-Analysis. *Poster presented at Consortium of Multiple Sclerosis Centers. 05/28/2019*
50. **Bishnoi A.**, Hernandez M. Dual task walking costs in older adults with Mild Cognitive Impairment: systematic review and meta-analysis. *Poster presented at Gait & Clinical Movement Analysis Society, Dallas, TX. 03/28/2019*
51. Yaejin Moon, **Alka Bishnoi**, Ruopeng Sun, Jong-Cheol Shin and Jacob J. Sosnoff. Teaching Older Adults How to Fall Safely. *Poster presented at American Society of Biomechanics. 08/10/2018*

52. Moon Y., **Bishnoi A.**, Wood T.A., Sosnoff J.J. Head-acceleration During Experimentally Induced Falls as a Function of Age. *Poster presented at Progress in Clinical Motor Control. State College, PA. 07/24/2018*
53. **Bishnoi A.**, Madhavan S. (2016). Comparison of the Mini-Best Evaluation Systems Test (Mini- BESTest) and Berg Balance Scale (BBS) in predicting walking speed post stroke. *Poster presented at American Congress Rehabilitation Medicine (ACRM), Chicago, Illinois. 11/2/2016*

RESEARCH SUPPORT

INTERNAL FUNDING

Kean University Faculty Budget Grant, Principal Investigator

“Effect of dual task intervention on prefrontal cortical activation and functional performance in community dwelling older adults with and without hypertension.”

2024-2026

Amount: \$36,615 (Total Costs)

Percent effort: 100%

EXTERNAL FUNDING

National Institute of Health, National Institute of Aging (NIA), R21 Trailblazer Grant,

Principal Investigator

2026-2029

“Impact of Dual-Task Intervention on Prefrontal Cortical Activation and Functional Performance in Community-Dwelling Adults with and without Hypertension”

Manuel E. Hernandez (mentor)

Amount: \$618,000 (Total Costs)

Percent effort: no support (Summary Statement given after review by Human Complex Mental Function (HCMF) study section meeting)

Department of Defense (DoD) U.S. Army Medical Research and Development, Arthritis Research Program Clinical Research Award - Clinical Trial, 2024

“High-Intensity Exercise With Reduced Knee Joint Loads for Individuals With Knee Osteoarthritis: The HI-LIGHT Intervention”

Amount: \$2,177,068 (Total Costs)

Role: Collaborator

Percent effort: no support

American Heart Association Fellowship Grant, Principal Investigator

“Effect of Dual task training on executive function and functional performance in adults with hypertension.”

2021-2022

Amount: \$68,610 (Total Costs)

Percent effort: no support

American Congress of Sports Medicine Research Grant, Principal Investigator

“Investigating a novel paradigm examining effects of hypertension on prefrontal cortical activity and dual task performance.”

2020-2021

Amount: \$5000 (Total Costs)

Percent effort: no support

American Heart Association Predoctoral Fellowship Grant, Principal Investigator

“Investigating a novel paradigm examining effects of hypertension on prefrontal cortical activity and dual task performance.”

2019-2020

Amount: \$31,016 (Total Costs)

Percent effort: no support

CLINICAL APPOINTMENTS

- ***Exercise Physiologist***
Akron General Medical Center, May 2014 – July 2014
- ***Physical Therapist***
Outpatient Rehabilitation
Prem Pushp Charitable Hospital, India, March 2012 – July 2013
- ***Physical Therapist (Internship)***
Outpatient Rehabilitation
Safdarjung Hospital, India, April 2011 – May 2011
- ***Physical Therapist (Internship)***
Outpatient Rehabilitation
Indian Red Cross Society, India, March 2011 – April 2011
- ***Physical Therapist (Internship)***
Spinal Cord Injury Unit
Indian Spinal Injuries Center, India, November 2010 – February 2011

HONORS AND AWARDS

- Research Time Release (RTR) Award, Kean University, 2025-2026
- Predominantly Undergraduate Institution Fellowship Award, 2024
- Research Time Release (RTR) Award, Kean University, 2024-2025
- Research Time Release (RTR) Award, Kean University, 2023-2024
- Research Time Release (RTR) Award, Kean University, 2022-2023
- University Fellowship Block Grant, University of Illinois at Urbana-Champaign, 2021
- Trainee Professional Development Award, Society of Neuroscience, 2020
- Supplemental Summer Block Grant, University of Illinois at Urbana-Champaign, 2020
- Teaching Scholar Certification, University of Illinois at Urbana-Champaign, 2020

- Diversity Fellowship Recipient, Neural Control of Movement, 2020
- Graduate Student conference award, University of Illinois at Urbana-Champaign, 2019
- Travel Award, Gait and Clinical Movement Analysis Society, 2019
- Board of Trustees Tuition Waiver Award, University of Illinois at Chicago, 2015-2017
- Van Doren Scholarship Award, 2017

UNIVERSITY COMMITTEES

- University Technology Committee, University Senate Appeals Committee Member, Kean University, June 2025- Present
- Annual Faculty Research Kean Conference Committee Member, Kean University, June 2025- Present
- CHPHS Research Coordinator KFT Representative, Kean University, September 2024- Present
- Doctor of Physical Therapy Student Progress Committee Chair, Department of Physical Therapy, Kean University, September 2024- Present
- University Senate Admissions and Retention Committee, Department of Physical Therapy representative, Kean University, June 2024- Present
- Doctor of Physical Therapy Student Progress Committee Co-Chair, Department of Physical Therapy, Kean University, September 2023- August 2024
- Doctor of Physical Therapy Admissions Committee, Department of Physical Therapy, Kean University, September 2022- Present
- Doctor of Physical Therapy Curriculum Committee, Department of Physical Therapy, Kean University, September 2022- Present
- Social Work Hiring Committee, Department of Social Work, Kean University, September 2022- Present
- Physician's Assistant Hiring Committee, Department of Physician Assistant, Kean University, September 2022- Present

PROFESSIONAL SERVICE (OTHER)

Ad hoc Reviewer for Scientific Journals

Frontiers in Rehabilitation Sciences, SAGE open medicine, Topics in Stroke Rehabilitation, BMC Geriatrics, Sensors, Aging & Mental Health, Systematic Reviews, Frontiers in Aging Neuroscience, Biomechanics, International Journal of Molecular Sciences, Healthcare, Clinical Interventions in Aging, Journal of Personalized Medicine, Archives of Gerontology and Geriatrics, Sensors, Brain Sciences, BMC in neurology, BMC complimentary therapies, Journal of Neuro engineering, Scientific reports, Complimentary therapies in medicine, Pathophysiology, JFMK.

MEMBERSHIP IN SOCIETIES

International Society of Posture and Gait Research (ISPGR)
Society for Neuroscience (SFN)
Gerontological Society of America (GSA)
Neural Control of Movement (NCM)
American Congress of Rehabilitative Medicine (ACRM)
American Society of Biomechanics (ASB)

UNIVERSITY TEACHING ROLES

Instructor, Research Content Coordinator, Cardiopulmonary Content Coordinator

KNPT 9160: Cardiopulmonary Physical Therapy, Department of Physical Therapy,
School of Kinesiology, Auburn University, Fall 2026

A doctoral upper-level course for physical therapy students (~21 students enrolled) that consists of lectures and series of laboratories designed to give students conceptual understanding and hands on experience with examination and rehabilitation of cardiovascular and pulmonary patients. As a course instructor, I have edited the course content and made changes to the curriculum.

DPT 6340: Research and Evidence Based Practice I, Department of Physical Therapy.
Kean University, Spring 2026

A doctoral upper-level course for physical therapy students (~20 students enrolled) that consists of lectures, series of presentations, paper assignments designed to give students conceptual understanding of clinical research and evidence-based practice. As a primary course instructor, I have edited the course content and made changes to the curriculum.

DPT 6510: Doctoral Seminar III, Department of Physical Therapy. Kean University,
Spring 2026

A doctoral-level upper-division course series for physical therapy students (~ 20 enrolled) that emphasizes scientific writing through structured poster presentation at Kean Research Days. As the primary instructor, I have revised the course content and updated the curriculum to strengthen students' academic writing skills.

DPT 6341: Research and Evidence Based Practice II, Department of Physical Therapy.
Kean University, Fall 2025

A doctoral upper-level course for physical therapy students (~20 students enrolled) that consists of lectures, series of presentations, paper assignments designed to give students conceptual understanding of clinical research and evidence-based practice. As a primary course instructor, I have edited the course content and made changes to the curriculum.

DPT 6510: Doctoral Seminar II, Department of Physical Therapy. Kean University, Fall

2025

A doctoral-level upper-division course series for physical therapy students (~ 20 enrolled) that emphasizes scientific writing through structured paper assignments. As the primary instructor, I have revised the course content and updated the curriculum to strengthen students' academic writing skills.

DPT 6160: PT Management of the Cardiopulmonary System, Department of Physical Therapy. Kean University, Fall 2022, Fall 2023, Fall 2024

A doctoral upper-level course for physical therapy students (~23 students enrolled) that consists of lectures and series of laboratories designed to give students conceptual understanding and hands on experience with examination and rehabilitation of cardiovascular and pulmonary patients. As a primary course instructor, I have edited the course content and made changes to the curriculum.

DPT 6130: Exercise Physiology, Department of Physical Therapy. Kean University, Spring 2023, Spring 2024, Spring 2025

A doctoral level course for physical therapy students (~23 students enrolled) that consists of lectures and series of laboratories designed to give students conceptual understanding and hands on experience with principles of exercise in cardiopulmonary rehabilitation. There is the introduction of ACSM guidelines and FIIT principles with pathophysiology and mechanisms behind exercise guidelines. As a primary course instructor, I have edited the course content and made changes to the curriculum.

DPT 6200: Contemporary Issues in Healthcare, Department of Physical Therapy. Kean University, Fall 2022, Fall 2023, Fall 2024, Fall 2025

A doctoral level course for physical therapy students (~23 students enrolled) that consists of lectures designed to provide students with an understanding of APTA policies, PT practice guidelines, and interprofessional team roles. As a primary course instructor, I have edited the course content.

DPT 6131: Health Promotion and Wellness, Department of Physical Therapy. Kean University, Spring 2023, Spring 2024, Spring 2025, Spring 2026

A doctoral upper- level course for physical therapy students (~23 students enrolled) that consists of lectures designed to provide students with a comprehensive overview of various conceptual and methodological approaches to take while providing care to patients of different pathologies.

DPT 6003: Human Anatomy, Department of Physical Therapy. Kean University, Summer 2023, Summer 2024, Summer 2025

A doctoral level course for physical therapy students (~23 students enrolled) that consists of team-based learning approach and series of laboratories consisting of cadaver dissections designed to give students conceptual understanding and hands on experience with human anatomy.

Teaching Assistant/ Lab Instructor

KIN 259: “Motor Development and Control”, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign, Fall 2017, Spring 2018, Fall 2021 (~90 students enrolled)

KIN 355: “Biomechanics of Human Movement”, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign, Fall 2018, Spring 2019, Fall 2019, Spring 2020, Fall 2020, Spring 2021 (~90 students enrolled)

KIN 122: “Physical Inactivity and Health”, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign, Fall 2019, Spring 2020, Fall 2020, Spring 2021 (~90 students enrolled)

KIN 247: “Introduction to Sports Psychology”, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign, Fall 2019, Spring 2020, Fall 2020, Spring 2021 (~90 students enrolled)

KIN 249: “Sports and Modern Society”, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign, Fall 2021 (~90 students enrolled)

CHLH 206: “Human Sexuality”, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign, Fall 2018, Spring 2019 (~90 students enrolled)

RESEARCH MENTORING

Graduate Students in School of Kinesiology, Auburn University

- Sydney Rembert, Graduate mentorship, Fall 2026- Present

Doctoral Students in Department of Physical Therapy, Kean University

- Juliana Lefano, Doctoral Research Assistant, 2022- 2024
- Hussnain Shakeel, Doctoral Research Assistant, 2023- 2025
- Declan Cioffi, Doctoral Research Assistant, 2024- 2026
- Rae-Ann Brown, Doctoral Research Assistant, 2025- 2026

Undergraduate Students, NSF Grant, Kean University (2025-2026)

- Simranpreet Kaur, NSF Research Assistant, 2025- 2026
- Katianna Perez, NSF Research Assistant, 2025- 2026
- Sabrina Cruz, NSF Research Assistant, 2025- 2026

Graduate Students in Department of Kinesiology, UIUC

- Qiqi Shen, International graduate mentorship program, Fall 2019
- Lian Wang, International graduate mentorship program, Fall 2019

CERTIFICATIONS

American College of Sports Medicine- Certified Clinical Exercise Physiologist, Basic Life Support (BLS)/Cardiopulmonary Resuscitation American Heart Association, CITI training certification, HIPAA training certification

PROGRAMMING SKILLS

R, STATA, SAS, SPSS