Madison Swails MS, ATC/L

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EDUCATION

Doctor of Philosophy (Ph.D.) in Biology August 2026
University of North Carolina at Charlotte; Charlotte, NC
Concentration: Molecular, Cellular, and Developmental Biology
Research Concentration: Biomechanics
Dissertation Topic: *"Biomechanical Profile and Tissue Adaptations of Individuals with and Without Chronic Ankle Instability During Real-World Gait"*

Master of Science in Athletic Training May 2020
High Point University; High Point, NC
Recipient, Dr. Ray Carr Award for Excellence in Athletic Training

Bachelor of Science in Middle / Secondary Education May 2018
Butler University; Indianapolis, IN
Concentration: Human Movement and Health Sciences
Minor: Recreational and Sport Studies

RESEARCH EXPERIENCE

Biodynamics Laboratory Research Assistant January 2024 – August 2026
University of North Carolina at Charlotte

- Administered gait study testing session that includes utilizing wearable technology and ultrasound imaging of the lower extremity
- Exported and managed large datasets from gait study testing sessions and balance testing sessions
- Developed a python code to align data between wearable devices
- Tracked, cleaned, and exported 3D motion capture gait assessment from VICON system
- Mentored undergraduate and graduate students in data collection, exporting, organization, and analysis

US Performance Center Summer Research Assistant May – August 2023
University of North Carolina at Charlotte

- Collaborated with members of the US Performance Center team and other colleagues from the university to develop a research question
- Administered testing protocols for Kaiser pneumatic system and Biodex isokinetic testing
- Developed testing protocol for US field hockey team including single limb hopping, drop landing, isometric mid-thigh pulls
- Exported and analyzed strength data and relationships

TEACHING EXPERIENCE

Clinical Assistant Professor of Athletic Training August 2026 – Present
Texas State University

- Created and maintained course documents, reading quizzes, PowerPoints, and exams for undergraduate and graduate athletic training courses on Canvas
- Provided in-person and online interactive lectures and labs to deliver anatomy content to undergraduate students
- Developed and implemented a therapeutic intervention course series focusing on educating athletic trainers on approaching rehabilitation interventions with an impairment-based approach

Primary Lecturer – Care and Prevention of Athletic Injuries Spring 2025
University of North Carolina at Charlotte

- Created and maintained course documents, reading quizzes, PowerPoints, and exams on Canvas website
- Developed and delivered biweekly lectures covering first-aid techniques, injury prevention methods, components of athletic injuries, and care of injuries
- Facilitated active learning activities including class discussions on various athletic injuries, case studies, and interactive demonstrations of prevention exercises
- Assessed student knowledge by writing and administering class exams

Teaching Assistant - Applied Kinesiology Fall 2024
University of North Carolina at Charlotte

- Provided a supplemental lecture in the absence of the professor covering forearm, wrist, and hand anatomy, physiology, innervations, actions of muscles, and important movement
- Aligned the lecture with the previous lectures of the professor and ensure that it covered material on the examination
- Acted as additional support to the students through office hours and individual meetings

Guest Lecturer – Advanced Biomechanics Spring 2024
University of North Carolina at Charlotte

- Assisted with supplemental labs sessions by providing feedback and creating hands-on activities
- Provided a 2 part-lecture on the concept of balance and its applications in biomechanics
- Acted as additional support to students through office hours and participation in in-class discussions on current biomechanical research

Teaching Assistant - Therapeutic Interventions Spring 2024
University of North Carolina at Charlotte

- Provided additional support to students through office hours and individual meetings
- Demonstrated therapeutic exercise techniques during in-class learning activities
- Guest lectured in the absence of the professor on the topic of ankle rehabilitation techniques

Teaching Assistant – Therapeutic Exercise Techniques Fall 2023

University of North Carolina at Charlotte

- Provided additional support to students through office hours and individual meetings
- Demonstrated therapeutic exercise techniques during in-class learning activities
- Guided students practicing manual therapy techniques, rehabilitation exercises, and joint mobilizations

Teaching Assistant – Anatomy and Physiology I & II Fall 2022 – Spring 2023
University of North Carolina at Charlotte

- Created lab learning stations that align with course lectures covering histology, the musculoskeletal, cardiovascular, and special sense systems
- Supported students through the course through individual meetings and office hours
- Reviewed materials with student through class-review sessions
- Provided study skills to students

PRESENTATIONS / PUBLICATIONS

Publications

Swails M, Hardy E, Dury J, Linens Shelley W, Thomas AC, Donovan L. *Assessing Balance via Cross-Line Laser in Individuals with Chronic Ankle Instability.* Frontiers in Sport and Active Living. 2025. Published.

Donovan L**, Swails M**, Paul R, Thomas AC *Immediate and Retention Effects of an Impairment-Based Rehabilitation Program With Differing Modes of Feedback on Patient and Clinical Outcomes Among Individuals With Chronic Ankle Instability.* 2025. (In Preparation)

Donovan L, **Swails M**, Paul R Thomas AC *Immediate and Retention Effects of an Impairment-Based Rehabilitation Program With Differing Modes of Feedback on Patient and Biomechanical Outcomes Among Individuals With Chronic Ankle Instability*. 2025. (In Preparation)

Presentations

Swails M, Thomas AC, Donovan L Effects of Differing Modes of Biofeedback within an Impairment-Based Rehabilitation Program on Gait Biomechanics among Patients with Chronic Ankle Instability. 2025.

- Accepted for Oral Presentation at National Athletic Trainers' Association conference

Donovan L, **Swails M**, Paul R, Thomas AC *Immediate and Retention Effects of an Impairment-Based Rehabilitation Program With Differing Modes of Feedback on Patient and Clinical Outcomes Among Individuals With Chronic Ankle Instability.* 2025.

- Secondary author on abstract accepted for Oral Presentation at National Athletic Trainers' Association conference

Swails M, Hardy E, Dury J, Thomas AC, Donovan L. *Cross-Line Laser Balance Assessment Relationship with Patient's Perceived Ankle Function in Individuals with Chronic Ankle Instability*. 2025.

- Primary author abstract accepted for Oral Presentation at Graduate Research Symposium University of North Carolina at Charlotte (Charlotte, NC)

Swails M, Hardy E, Dury J, Thomas AC, Donovan L. *Validating a Cross-Line Laser to Assess Balance in Individuals with Chronic Ankle Instability.* 2024.

- Primary author abstract accepted for Free Paper Presentation at 9th Annual International Ankle Consortium in Strasbourg, France

Swails M, Hardy E, Dury J, Thomas AC, Donovan L. *Validation of a Stability Testing Using a Cross-Line Laser in Individuals with Chronic Ankle Instability.* 2024.

- Primary author on NATA abstract accepted for Poster presentation at NATA conference 2024

Osbourne MK, Ford KR, Waxman JP, Tarara DT, Lindblade I, Pexa BS. *Relationship Between Hip Range of Motion and Lower Extremity Power Output in Collegiate Baseball Players.* 2019.

- Primary author on a NATA abstract accepted for a Rapid-Fire Session at NATA Conference 2020

ATHLETIC TRAINING CLINICAL EXPERIENCE

Clinical Assistant August 2021 – August 2022

Orthocarolina Sports Medicine Center

- Clinical assistant for Dr. Dana Piasecki and Maragaret Lynch PA-C
- Conducted initial history of patient with comprehensive questions, medication review and taking vitals
- Removed sutures and educate wound care for post-operative patients
- Managed triage questions through returning patient phone calls and online messages

Seasonal Assistant Athletic Trainer July 2020 – July 2021

University of Louisville

- Athletic trainer for women's soccer and tennis teams provided coverage of practices, strength and conditioning sessions, and all home / away matches
- Created and implemented comprehensive rehabilitation programs based on evidence-based practice for post-surgical athletes including ACLR and Ulnar Nerve Transposition
- Evaluated and implemented effective treatment and care of minor soft tissue injuries including hamstrings tears, hip flexor strains, rotator cuff strains, and tennis elbow
- Communicated effectively with women's tennis and soccer coaches, doctors and performance coaches daily updated of athlete's status, COVID protocols, and treatment plans for athletes

AWARDS / GRANTS

Graduate Student Research Summer Fellowship 2025
Future Faculty Teaching Fellowship 2025
NATA Darren L. Johnson MD Doctoral Grant Recipient 2025
STEM Communication Course Certificate 2023 - 2024

CREDENTIALS AND LICENSES

Certified Athletic Trainer, Board of Certification *#2000038802* — July 2020 - Present
CPR / First Aid / AED for Professional Rescuers – American Red Cross — July 2018 – Present
NPI: 1578056925

MEMBERSHIPS

Athletic Trainers Osteoarthritis Consortium — December 2024 - Present
Association of Biological Science Graduate Students — August 2022 - Present
Biology Graduate Student Outreach — August 2022 - Present
National Athletic Trainer's Association #105138 — June 2018 - Present
Mid-Atlantic Athletic Trainer's Association — June 2018 - Present
North Carolina Athletic Trainer's Association — June 2018 - Present

PROFESSIONAL COMMUNITY

NATA Doctoral Mentor Program — 2024 - 2025
Mentor & Chaperone to Fullbright Scholar at NATA Conference — 2024 & 2025
UNCC Undergraduate Research Symposium Abstract Reviewer — 2025 & 2026

SERVICE

Manuscript Reviewer for International Journal of Sports Medicine — February 2025
Manuscript Reviewer for International Journal of Athletic Therapy and Training — March 2025
Manuscript Reviewer for BMC Sports, Science, Medicine, and Rehabilitation — January 2025