

Degree Proposal
Bachelor of Science in Kinesiology
Bouvé College of Health Sciences

Executive Summary

The Bachelor of Science in Kinesiology is a pre-allied health degree designed to serve as a direct pathway to Doctor of Physical Therapy (DPT) programs. It replaces the recently discontinued Exercise Science program and offers an academic foundation in biomechanical, physiological, and behavioral sciences. The curriculum is intentionally aligned with graduate-level competencies, ensuring that students are not only academically prepared but also professionally equipped to thrive in competitive DPT programs and meet the demands of a rapidly evolving healthcare landscape. Students will have opportunities to pursue professional certifications such as CSCS and NASC, engage in AI-driven human movement assessment, and contribute to evidence-based practice through collaborative research with the NU Department of Athletics. The integration of emerging technologies—such as AI-powered gait and movement analysis, robotics-assisted therapy for neuromuscular relearning, and wearable smart sensors—positions the program at the forefront of physical therapy innovation. Extended realities, including augmented and virtual reality, are increasingly used in prevention, elite performance training, and rehabilitation, offering precision and customization that redefine client and patient experiences.

Curriculum

The BS in Kinesiology will consist of 11 NU pathway courses, 42-43 SH in core courses, 38 SH in science requirements, 3 SH in capstone, 11 SH in other major requirements, 12 SH in selectives, and the remainder of SH in general electives, totaling 128 SH over an anticipated 4 years. The accelerated undergraduate program can be completed in 3 years. The student will need to apply AP, IBC, or transfer credits from previous experiences, and or take classes during the summer term.

Students will gain foundational knowledge in human anatomy, movement science, exercise physiology, motor learning, and research methods. Opportunities for clinical shadowing, research apprenticeships, and community-based health initiatives are embedded to enhance real-world learning.

Contribution to University Academic Plan

The program's design reflects the priorities of Northeastern University's Academic Plan and the Bouvé College Strategic Plan 2025, advancing institutional goals through diversification of the student body and faculty, expanded industry engagement, and innovative applications of AI technology.

- **Workforce Demand:** The U.S. Bureau of Labor Statistics projects a 15% growth in physical therapy jobs over the next decade. With an aging

population, increased focus on preventive health care, and expansion of the sport and fitness culture across the lifespan, a BS in Kinesiology offers early preparation to meet this rising demand through targeted, relevant coursework. Cooperative education (co-op), undergraduate research, and sport-centered field experiences embed high-impact learning within the curriculum.

- **Graduate Pathway Alignment:** The Bachelor of Science in Kinesiology establishes a direct academic pathway into DPT programs, enhancing student preparedness and competitiveness for graduate admission that emphasizes individualized care delivery.
- **Interdisciplinary Integration:** By incorporating biology, neuroscience, behavioral science, and public health, the curriculum models the modern health care team and interprofessional education, which is essential preparation for today's DPT education.

Resources

The program is primarily comprised of existing undergraduate coursework already being offered by the department, Bouvé, or other colleges across the university. The department has sufficient faculty to offer these courses for new students as well as the two new courses included in the program. Additional selectives are in the process of being created to more deeply integrate PTMRS faculty into the course offerings.

