Program Review Self Study

Program Reviewed: Undergraduate and Master's Program in Kinesiology
Degree(s): Bachelor of Science in Kinesiology, Master of Science in Kinesiology
Program Chair or Director: Dr. Richard Rosenkranz
Dean: Dr. Ronald Brown
Date of Report: September 27, 2023

GENERAL INSTRUCTIONS
Please complete the program review self-study using this template.

If this review is covering several degree levels, please be sure to address each level in your responses to the questions.

Send completed self-study electronically to: programreview@unlv.edu

The Senior Vice Provost for Academic Affairs is committed to engaging programs in a clear and useful program review process. To facilitate continuous improvement, we welcome feedback from programs and departments, external or internal reviewers and any other constituents of the process.

I. Program Description

College/Program: Kinesiology
College or School: School of Integrated Health Sciences
Unit: Department of Kinesiology and Nutrition Sciences
Web Address: https://www.unlv.edu/degree/bs-kinesiology
Program(s) being reviewed: Undergraduate and graduate programs in Kinesiology
Degrees and their abbreviations:
Bachelor of Science in Kinesiology (B.S. Kinesiology)
Master of Science in Kinesiology (M.S. Kinesiology)

Primary Individual Completing This Worksheet
Name: Dr. Richard Rosenkranz
Title: Chair & Professor
Campus phone number: 702-895-5198
Mail stop: Box 453034
E-mail: richard.rosenkranz@unlv.edu
Fax number: None
Date of self-study: September 19, 2023

Other Faculty Involved in Writing This Report:
Names:

Dr. Van Whaley, Kinesiology Undergraduate Coordinator
Dr. James Navalta, Kinesiology Graduate Coordinator
Ms. Jessica De Jesus, Academic Program Coordinator

II. Catalog

1. Please insert the current catalog description for the academic program.

Undergraduate Program

The Bachelor of Science in Kinesiology focuses on the study of human performance. Students in the degree program will study foundational sciences such as anatomical kinesiology, biomechanics, exercise physiology, motor behavior, and the social psychology of physical activity. Successful degree candidates will complete the set of core Kinesiology courses, the UNLV general education requirements, and an area of specialization. Students can choose between two specialization areas: "Allied Health" or "Comprehensive." The Allied Health specialization option provides education and training for students who wish to prepare for advanced study in medicine, physical therapy, or other allied health fields. The Comprehensive specialization option provides students the opportunity to pursue basic and applied studies of the physiological, biomechanical, and social-psychological aspects of human movement and performance.

2023-2024 Undergraduate Catalog

Kinesiology Major- Bachelor of Science (BS)
Please see the UNLV Department of Kinesiology and Nutrition Science web page at https://www.unlv.edu/kns/kinesiology for information about department programs, faculty and facilities. Degree worksheets and 4/5 year plan for the major are available at https://www.unlv.edu/degree/bs-kinesiology.

Please see advising information at the UNLV The Divisions of Health Sciences Academic Advising Center at https://www.unlv.edu/healthsciences/advising.

Accreditation
Institution - Northwest Commission on Colleges and Universities https://nwccu.org/

Learning Outcomes

1. Recognize Kinesiology career options.
2. Demonstrate knowledge of functional anatomy and biomechanics.
3. Describe the biological foundations of motor control, explain information processing and learning theories, and identify practical concerns relating to enhancement of motor performance.

4. Explain the biomechanical principles that underlie human motor performance.
5. Specify the physiological response to exercise and describe the systemic adaptations that occur at rest and during submaximal and maximal exercise following chronic aerobic, anaerobic, and strength training.
6. Demonstrate knowledge of and ability to discuss the physiological basis of the major components of physical fitness, and develop individual fitness programs.
7. Evaluate current concepts in nutrition in relation to health and disease, and apply guidelines for designing a healthy diet.
8. Explain acute care of sport related injury and illness, and design risk management and injury prevention strategies.
9. Evaluate popular nutrition practices utilized by competitive and recreational athletes, focusing on dietary assessment, scientific validity, and efficacy.
10. Explain the risk factor concept of disease and the role of physical activity in modifying risk factors.
11. Analyze and evaluate research data.

University Graduation Requirements

- Please see Graduation Policies for complete information

Kinesiology Degree Requirement - Total: 120 Credits

General Education Requirements - Subtotal: 36-45 Credits

First-Year Seminar - Credits: 2-3

English Composition - Credits: 6

- ENG 101 - Composition I
- ENG 102 - Composition II

Second-Year Seminar - Credits: 3

Constitutions - Credits: 4-6

Mathematics - Credits: 3

- MATH 124 - College Algebra or higher

Distribution Requirement - Credits: 18
Please see Distribution Requirements for more information.

- **Humanities and Fine Arts: 9 credits**
  - 2 courses from two different humanities areas
  - one course in fine arts
- **Social Science: 9 credits**
  - One course from 3 different fields of study
- **Life and Physical Sciences and Analytical Thinking:**

- Automatically satisfied by the Major

Multicultural and International

Multicultural, one 3 credit course required
International, one 3 credit course required

These courses may overlap with general education and major requirements. A single course ma not meet the multicultural and international requirements simultaneously. For the list of approved multicultural and international courses, go to https://www.unlv.edu/provost/multicultural-requirements

Major Degree Requirements - BS in Kinesiology - Subtotal: 66 Credits

---

Sciences Requirements - Credits: 12

- BIOL 189 - Fundamentals of Life Science
- KIN 223 - Human Anatomy and Physiology I
- KIN 224 - Human Anatomy and Physiology II

Kinesiology Foundation Courses - Credits: 27
('C' or better in all KIN-prefixed classes)

- KIN 170 - Introduction to Kinesiology
- KIN 150 - Emergency Management of Injuries and Illness
- KIN 200 - Statistics for the Health Sciences
- KIN 245 - Anatomical Kinesiology
- KIN 312 - Motor Control and Learning
- KIN 346 - Biomechanics
- KIN 350 - Social Psychology of Physical Activity
- KIN 391 - Exercise Physiology

A minimum of 27 additional credits of upper division KIN or NUTR-prefixed courses are required.

General Electives – Credits: 9-18 (sufficient credits to bring the student's total to 120).

Total Credits: 120

Notes:
1.KIN 424, KIN 350, KIN 475, KIN 490 are milestone courses for Kinesiology B.S.

Graduate Program

The Master of Science in Kinesiology enables students to choose an Athletic Training (accredited program that is separately evaluated), Biomechanics, or Motor Control and Learning emphasis. The programs are designed to provide students with the theoretical foundations of the movement-based sciences. Through involvement in directed research projects, students

obtain an in-depth understanding of laboratory equipment and research applications. Students select a graduate advisory committee and have an option to complete a thesis, or to select the non-thesis track.

2023-2024 Graduate Catalog

Master of Science - Kinesiology

Plan Description

The Master of Science – Kinesiology is designed for students interested in the study of human performance. Students are provided with the theoretical foundations of the movement-based sciences and select an emphasis in biomechanics, exercise physiology, motor learning/control, or sports medicine. Through involvement in directed research projects, students obtain an in-depth understanding of laboratory equipment research and applications in the biomedical sciences. Graduates are prepared to make applications of the movement sciences in research, clinical or athletic settings and for entrance into doctoral programs in kinesiology.

For more information about your program including your graduate program handbook and learning outcomes please visit the Degree Directory.

Plan Admission Requirements

Application deadlines

Applications available on the UNLV Graduate College website.

Students are admitted in the fall, spring, and summer semesters. Applicants for admission must have an undergraduate major in kinesiology, exercise science, physical education, athletic training, biology, nutrition, or a related academic discipline. Students who do not have an undergraduate major listed above must take the following UNLV remediation courses (or equivalent at another university): KIN 245 (Anatomical Kinesiology), KIN 312 (Motor Control and Learning) KIN 346 (Biomechanics), KIN 391 (Exercise Physiology).

Applicants must have a minimum overall undergraduate grade point average of 2.75 (A=4.0), or 3.00 (A=4.0) in the last two years.

The Graduate Record Examination (GRE) is optional but may be used by the student toward admission (as evidence of quantitative abilities, and/or evidence of verbal abilities).

Interested applicants must upload the following information into the Grad Rebel Gateway system:

1. Applicants must have an earned baccalaureate degree from a regionally accredited four-year college or university or international equivalent. Unofficial or official transcripts from all previously attended colleges and universities will need to be submitted in the online application. Official transcripts are required once given an offer of admission into the program.
2. A resume or curriculum vitae that highlights: clinical, field, research, and/or teaching experience, all specific to kinesiology.

3. Evidence of quantitative abilities: This may include, but are not limited to the quantitative portion of the GRE, a project that required the systematic handling of data, grade in an upper-level statistics course, or an assignment in which data was collected and analyzed.
4. Evidence of verbal abilities: This may include, but are not limited to the verbal portion of the GRE, a review of literature, a culminating experience document, or an end-of-semester assignment.
5. A letter of intent that addresses: Preferred faculty mentor(s) (aligned with the students' research direction). Further explanation of clinical, field, research, or teaching experience noted in the resume, if desired. Motivation for attending UNLV. Summary of educational goals. Summary of intended research activities and interests.
6. Two letters of recommendation from persons familiar with the applicant's academic record and potential for graduate study.

Accelerated BS-MS Subplan Admission Requirements:
The Accelerated BS-MS degree program is designed to provide high-achieving UNLV Kinesiology undergraduate students with the opportunity to enroll in graduate courses that can be used toward both the undergraduate and the MS Kinesiology degree.

Up to nine credits of approved graduate-level coursework, with a grade of B or better, can be taken as 600-level electives in their senior year and those credits can be counted toward the graduate degree. Students admitted into this subplan have taken 3, 6 or 9 credits of graduate-level courses that can be applied toward their MS Kinesiology degree at UNLV. These credits reduce the total needed to complete the MS degree. Only KIN 656, KIN 657, KIN 611 or KIN 692 may be used toward the 9 total possible credits with a B or better.

Students must meet all of the following criteria to be eligible for the Accelerated BS-MS Subplan:

1. Completion of KIN 346 and KIN 391 with a minimum grade of B for both courses.
2. Submission of a completed UNLV Graduate College Approval for an Undergraduate to Enroll in a Graduate-Level Course form to the Graduate College, no less than two weeks before the beginning of the semester for which they would like to register for the graduate course(s).

For a student to be admitted into the Accelerated BS-MS Subplan, they must submit an application for an MS Kinesiology. The student must follow the normal application procedures found on the UNLV Graduate College website.

Students must meet all departmental and Graduate College application deadlines.
Students should indicate in their application materials that they are participating in the Accelerated Subplan. Students must choose the Accelerated Subplan.
The Graduate Record Examination (GRE) is optional but may be used by the student toward admission (as evidence of quantitative abilities, and/or evidence of verbal abilities).

Interested applicants must upload the following information into the Grad Rebel Gateway system:
1. Completed application
2. Copies of all transcripts sent to the Graduate College.

3. A resume or curriculum vitae that highlights: clinical, field, research, and/or teaching experience, all specific to kinesiology.
4. Evidence of quantitative abilities: This may include, but are not limited to the quantitative portion of the GRE, a project that required the systematic handling of data, grade in an upper-level statistics course, or an assignment in which data was collected and analyzed.
5. Evidence of verbal abilities: This may include, but are not limited to the verbal portion of the GRE, a review of literature, a culminating experience document, or an end-of-semester assignment.

All domestic and international applicants must review and follow the Graduate College Admission and Registration Requirements.
Students are accepted into a degree program as described in the Graduate Catalog. The faculty and corresponding sub-disciplines and sub-plans within the described programs are subject to change at any time.

Plan Requirements

See Subplan Requirements below.
Subplan 1: Thesis
Subplan 2: Non-Thesis
Subplan 3: Accelerated BS-MS

Subplan 1 Requirements: Thesis
Total Credits Required: 33

Course Requirements

Biomechanics Course – Credits: 3
Complete one of the following courses:

- KIN 656 - Biomechanics of Endurance Performance
- KIN 736 - Biomechanical Applications in Kinesiology
- KIN 737 - Biomechanics of Strength
- KIN 743 - Research Techniques in Biomechanics

Motor Learning/Motor Control Course – Credits: 3
Complete one of the following courses:

- KIN 760 - Motor Skill Learning and Performance
- KIN 761 - Human Motor Control
- KIN 762 - Motor Learning Applications
- KIN 765 - Neurophysiology of Movement

Exercise Physiology Course – Credits: 3
Complete one of the following courses:

- KIN 657 - Physiology of Endurance Performance
- KIN 740 - Advanced Exercise Physiology

Research Courses – Credits: 6
Complete 6 credits by completing all of the following courses:

- KIN 750 - Research Methods in Kinesiology and Nutrition Sciences Research
- KIN 751 - Selected Application of Statistical Techniques I

Specialization Courses – Credits: 9
Complete 9 credits of advisor-approved coursework. Research opportunities and course work are available in biomechanics, exercise physiology, motor learning/motor control, and sports medicine.

Elective Courses – Credits: 3
Complete 3 credits of advisor-approved elective coursework.

Thesis – Credits: 6

- KIN 749 - Thesis

Degree Requirements

1. Completion of a minimum of 33 credits with a minimum GPA of 3.00.
2. In consultation with their advisor, a student will organize a thesis committee of at least three departmental members. In addition, a fourth member from outside the department, known as the Graduate College Representative, must be appointed. An additional committee member may be added at the student and department's discretion. Please see Graduate College policy for committee appointment guidelines.

Graduation Requirements

The student must submit and successfully defend their thesis by the posted deadline. The defense must be advertised and is open to the public.
After the thesis defense, the student must electronically submit a properly formatted pdf copy of their thesis to the Graduate College for format check. Once the thesis format has been approved by the Graduate College, the student will submit the approved electronic version to ProQuest. Deadlines for thesis defenses, format check submissions, and the final ProQuest submission can be found here.
Students may apply for graduation up to two semesters prior to completing their degree requirements. All required forms must be submitted to the graduate college via the Grad Rebel Gateway.

Subplan 2 Requirements: Non-Thesis
Total Credits Required: 33

Course Requirements

Biomechanics Course – Credits: 3

Complete one of the following courses:

- KIN 656 - Biomechanics of Endurance Performance
- KIN 736 - Biomechanical Applications in Kinesiology
- KIN 737 - Biomechanics of Strength
- KIN 743 - Research Techniques in Biomechanics

Motor Learning/Motor Control Course – Credits: 3
Complete one of the following courses:

- KIN 760 - Motor Skill Learning and Performance
- KIN 761 - Human Motor Control
- KIN 762 - Motor Learning Applications
- KIN 765 - Neurophysiology of Movement

Exercise Physiology Course – Credits: 3
Complete one of the following courses:

- KIN 657 - Physiology of Endurance Performance
- KIN 740 - Advanced Exercise Physiology

Research Courses – Credits: 6
Complete 6 credits by completing all of the following courses:

- KIN 750 - Research Methods in Kinesiology and Nutrition Sciences Research
- KIN 751 - Selected Application of Statistical Techniques I

Specialization Courses – Credits: 9
Complete 9 credits of advisor-approved coursework. Research opportunities and course work are available in biomechanics, exercise physiology, motor learning/motor control, and sports medicine.

Elective Courses – Credits: 6
Complete 6 credits of advisor-approved elective coursework.

Professional Paper – Credits: 3

- KIN 748 - Professional Paper

Degree Requirements

1. Completion of a minimum of 33 credits with a minimum GPA of 3.00.
2. In consultation with their advisor, a student will organize a committee of at least three departmental members. In addition, a fourth member from outside the department, known as the Graduate College Representative, must be appointed. An additional committee member may be added at the student and department's discretion. Please see Graduate College policy for committee appointment guidelines.

Graduation Requirements

The student must successfully complete a professional paper.

Students may apply for graduation up to two semesters prior to completing their degree requirements. All required forms must be submitted to the graduate college via the Grad Rebel Gateway.

Subplan 3: Requirements: Accelerated BS-MS
Total Credits Required: 24-30

Course Requirements

High-achieving UNLV Kinesiology undergraduate students may enroll in up to three graduate courses (9 credits) that can be used toward the MS Kinesiology degree: only KIN 656, KIN 657, KIN 611 or KIN 692 may be used toward the 9 total possible credits with a B or better.

Biomechanics Course – Credits:3
Complete one of the following courses:

- KIN 656 - Biomechanics of Endurance Performance
- KIN 736 - Biomechanical Applications in Kinesiology
- KIN 737 - Biomechanics of Strength
- KIN 743 - Research Techniques in Biomechanics

Motor Learning/Motor Control Course – Credits: 3
Complete one of the following courses:

- KIN 760 - Motor Skill Learning and Performance
- KIN 761 - Human Motor Control
- KIN 762 - Motor Learning Applications
- KIN 765 - Neurophysiology of Movement

Exercise Physiology Course – Credits: 3
Complete one of the following courses:

- KIN 657 - Physiology of Endurance Performance
- KIN 740 - Advanced Exercise Physiology

Research Courses – Credits: 6
Complete 6 credits by completing all of the following courses:

- KIN 750 - Research Methods in Kinesiology and Nutrition Sciences Research
- KIN 751 - Selected Application of Statistical Techniques I

Specialization Courses – Credits: 9
Complete 9 credits of advisor-approved coursework. Research opportunities and course work are available in biomechanics, exercise physiology, motor learning/motor control, and sports medicine. KIN 611 or KIN 692 may be applied as specialization courses. Only a total of 9 credits of the following courses taken as an undergraduate may be applied to the MS degree (KIN 756, 757, or 611 or KIN 692).

Elective Courses – Credits: 6
Complete 6 credits of advisor-approved elective coursework.

Professional Paper – Credits: 3

- KIN 748 - Professional Paper

Degree Requirements

1. Completion of a minimum of 24-30 credits with a minimum GPA of 3.00.
2. In consultation with their advisor, a student will organize a committee of at least three departmental members. In addition, a fourth member from outside the department, known as the Graduate College Representative, must be appointed. An additional committee member may be added at the student and department's discretion. Please see Graduate College policy for committee appointment guidelines.

Graduation Requirements

The student must successfully complete a professional paper.
Students may apply for graduation up to two semesters prior to completing their degree requirements. All required forms must be submitted to the graduate college via the Grad Rebel Gateway.

2. Has the catalog description/program undergone substantial change(s) since the last program review? If yes, please describe the substantive changes.

Yes, there have been updates in the catalog and our programs' public-facing UNLV webpages. For the bachelor of science degree program, there had been a pre-Kinesiology major that caused problems and was subsequently dropped. Previously, there were specialization options within the B.S. that have now been discontinued so that students and their advisors have flexibility within one program. For the M.S. in Kinesiology program, there have not been any substantial changes to the program in recent years. This graduate program description includes potential areas of emphasis, such as motor learning/control, sports medicine, exercise physiology or biomechanics.

III. Relationships

3. What relationship does this program have to other programs or institutions in the NSHE system?

The Kinesiology programs have articulation or transfer agreements with several other programs in the Nevada System of Higher Education (NSHE) system. These agreements facilitate the transfer of credits, so students can apply course work to the bachelor's degree program in Kinesiology. Specifically, the UNLV Kinesiology undergraduate program has articulation agreements with:

- College of Southern Nevada (CSN)
- University of Nevada, Reno (UNR)
- Great Basin College (GBC)
- Western Nevada College (WNC)

In addition to transfer agreements, UNLV Kinesiology also has transfer agreements with several other programs in the NSHE system. These agreements allow students who have completed a certain number of credits in a related program at another NSHE institution to transfer those credits to UNLV and count them towards a bachelor's degree in Kinesiology. The programs with which UNLV Kinesiology has transfer agreements include:

- CSN
- UNR
- GBC
- WNC
- Truckee Meadows Community College (TMCC)
- Nevada State College (NSC)

UNLV Kinesiology also has several collaborations and partnerships with other programs in the NSHE system. These collaborations and partnerships allow students to participate in research projects, internships, and other educational opportunities at other NSHE institutions. The programs with which UNLV Kinesiology has collaborations and partnerships include:

- CSN
- UNR
- GBC
- WNC
- TMCC
- NSC
- Desert Research Institute (DRI)
- Las Vegas Natural History Museum
- University of Nevada Cooperative Extension

The UNLV Kinesiology programs have strong relationships with other programs in the NSHE system. These relationships allow students to transfer credits, participate in research projects, and gain valuable experience in a variety of settings. Many M.S. students carry on from a B.S. in Kinesiology while others previously attended other NSHE institutions or those out of state.

The Kinesiology B.S. program has a strong presence of transfer students with 79 new transfers in fall 2022. Forty percent of these students (n=31) transferred from CSN, and eight additional students transferred into the Kinesiology program from other Nevada institutions. Thus, the Kinesiology program is a valuable pipeline connecting students with opportunities to continue their degree in collaboration with other state NSHE institutions.

4. Describe the relationship between this program and other UNLV programs. How does this program serve or interact with other areas of the institution?

Undergraduate Program

The Kinesiology Undergraduate Program is housed within the Department of Kinesiology and Nutrition Sciences in the School of Integrated Health Sciences. There is ample cooperation among the students and faculty of the undergraduate program in Kinesiology, undergraduate program in Nutrition, and the undergraduate program in Athletic Training (this is being taught out as it moves to a Master's program). There are also connections between the undergraduate Kinesiology program and the Master's in Kinesiology (including an Accelerated B.S.–M.S. program) and the newly approved Master's in Athletic Training program.

The UNLV minor in Kinesiology can fit with a variety of other programs, depending on the student's interests and career goals. The minor in Kinesiology provides students with a multi-faceted view of human performance. Students earning a minor in Kinesiology will study foundational sciences such as anatomical kinesiology, biomechanics, exercise physiology, motor behavior, and the social psychology of physical activity. The minor can also be a good fit for students who are interested in pursuing a career in the fitness industry, such as personal training, group fitness instruction, or sports performance training. The Kinesiology minor pairs well with other majors, including Nutrition because content knowledge blends to create a synergistic understanding of how nutrition and activity interact. Students who are interested in pursuing a career in the allied health professions minor in Kinesiology to gain a strong foundation in the biological and physical sciences that are essential for these professions.

So Kinesiology students take many courses outside their program, especially as they are fulfilling their general education requirements during their freshman and sophomore years. This experience helps students build relationships in other areas of the institution and community to construct a holistic and well-rounded experience.

Kinesiology is also a purveyor of service courses through KIN 200 (Statistics for the Health Sciences), KIN 223 and KIN 224 (Human Anatomy and Physiology I & II), which are required prerequisites for most healthcare related programs, such as nursing. Program faculty also teach HSC 100 (Introduction to Academia and Scholarship in Health Sciences), which provided more than 300 enrollments in fall semester of 2022. These classes are vital to the function of the institution because they provide a foundation for both Kinesiology majors as well as those outside the department. In the spring of 2023, KIN 223 and KIN 224 had 940 enrollments suggesting a broad reach of service to the institution and a vibrant campus community that brings students together from multiple departments in a shared learning experience. Class descriptions for the largest Kinesiology service courses are shown in the list below.

- HSC 100: Introduction to Academia and Scholarship in Health Sciences. This First Year Seminar exposes students to majors, careers, and scholarship in health sciences to enhance inquiry and critical thinking skills.

- KIN 200/NURS 200: Statistics for the Health Sciences. Introduction to quantitative methods in the analysis and interpretation of data from research in the health and human movement sciences. Emphasis on conceptual understanding, appropriate application of tests, and interpretation of results.
- KIN 223: Human Anatomy and Physiology I. Comprehensive study of the structure and function of the human body outlining physical and chemical principles which apply to cell organization, skeletal system, muscular system and nervous system.
- KIN 224: Human Anatomy and Physiology II. Comprehensive study of the structure and function of the human body outlining physical and chemical principles which apply to internal body systems including the cardiovascular system, respiratory system, digestive system, urinary system, immune system, endocrine systems, and reproductive systems.

The general education requirements for Kinesiology ensure that students have broad knowledge and skills spanning multiple areas. These courses provide interaction with students in other majors or fields of study. The most common general education courses include but are not limited to:

- Soc 101 Principles of Sociology
- Psy 101 General Psychology
- Anth 103 The Evolution of Everything
- Com 101 Oral Communication (Recommended)
- Hist 101 US: Colonial Period
- Hist 102 US Since 1877
- Math 124 College Algebra
- Eng 101 Composition 1
- Eng 100L Composition Intensive Lab
- Eng 105L Critical Reading Lab
- Eng 102 Composition 2
- Edu 280 Valuing Cultural Diversity

Undergraduates who complete their B.S. in Kinesiology are well-positioned to pursue graduate degrees in other UNLV programs including the Physical Therapy program, Occupational Therapy program, Master's of Science in Kinesiology, and PhD in Interdisciplinary Health Sciences. The Bachelor's of Science in Kinesiology also prepares students to enter professional programs in Medicine and Dental Medicine. Thus, the undergraduate degree in Kinesiology is an avenue to prepare students for programs that serve high-need areas in Nevada.

In addition to creating a student pipeline in specialized high-need areas, Kinesiology faculty also provide service beyond the program, maintaining a plethora of connections and collaborations within the department. For example, Kinesiology faculty members collaborate with faculty in Nutrition Sciences and Athletic Training to provide an integrated approach to human health that emphasizes how aspects of movement interact with nutrition and athletic development. The collaboration continues outside of the department through the interdisciplinary PhD program in Neuroscience. Kinesiology faculty collaborate faculty from Psychology, and Brain Health to

create a program that maximizes the learning experience for students who are training in neuroscience.

The Advising Center for Kinesiology and Nutrition Sciences at UNLV provides a variety of services to students, including but not limited to: academic advising, career counseling, personal counseling, and student services. Advisors also connect students to campus resources, such as tutoring, financial aid counseling, and disability services. At the graduate level, major professors and the wider committee provide advising for students. Students can schedule an appointment with an advisor online or by telephone. The Advising Center is a valuable resource for Kinesiology students. By taking advantage of the services offered by the Advising Center, students can get the help they need to succeed in their studies and achieve their academic and career goals. Vaune Kadlubik serves as director for the advising center, and has been a valuable resource who can access transcripts and student records to find rapid solutions to student requests and questions.

During the pandemic, Kinesiology received substantial support from Nicole Hudson who was the Associate Director of Online Education at the time.[1] Nicole worked diligently to help Kinesiology instructors transition to online learning during the unfolding emergency. She provided guidance on best practices in asynchronous, online, and hybrid formats. A particular problem for Kinesiology was how to employ successful instructional strategies in large enrollment courses, such as KIN 170 Introduction to Kinesiology, KIN 200 Statistics for Health Sciences, KIN 346 Biomechanics, and KIN 391 Exercise Physiology. In each of these cases, students benefit from opportunities to engage in applied learning, smaller group collaborations, and by getting individualized feedback from instructors.

Undergraduate and Graduate Programs

The library resources and services are vitally important to the Kinesiology programs. The Lied Library employs a librarian position who is devoted to health sciences. Xan Goodman works diligently and proactively to acquire resources to support Kinesiology and other health sciences programs. These resources are especially important in required gateway courses, KIN 223 and KIN 224 (Anatomy and Physiology) because students must master a large quantity of complex information. The A & P courses make extensive use of physiology models in classrooms and laboratories. The library provides a service that allows students to check-out these models for study and practice. If the Kinesiology and Nutrition Sciences department acquires new models or updated equipment, the library mirrors these purchases so that students use the same model in their labs and in the library. Having extensive support from library personnel has a positive impact on student grades and progress.

The Graduate Commons is an exclusive study space for UNLV graduate and professional students and is maintained by the Graduate and Professional Student Association. The commons is located in the Lied Library - Room 2141 (second floor). The Graduate Commons features a variety of services including a computer lab equipped with a variety of PCs and MAC

[1] Nicole Hudson is now the Executive Director of Workforce Education at UNLV

computers, a copier, multi-feed flatbed scanners, color laser printer, office supplies, whiteboards, a small kitchen area, and more. A small conference room is also available for meetings and study groups on a reservation basis.

As the librarian dedicated to health sciences, Xan works diligently to ensure that resource availability is clear and current. To manage demand for models and to help students plan their time, Xan created a webpage listing all of the models with availability information that is updated in real-time. Additionally, Xan and the A&P faculty start each semester with in-person library orientation events to help students navigate library resources and use research materials. Xan is also a research mentor for graduate students and serves on multiple master's and doctoral committees. Students who worked with her in this capacity offered sincere acknowledgements for her role in their academic progress. Xan also functions in a community engagement capacity helping UNLV Libraries acquire the National Network of Libraries of Medicine Pacific Southwest Region Express Outreach Award. This $7,000 award recognizes and supports population health initiatives through "Building a Healthier Las Vegas through Participatory-Based Creation of Community Health Workforce Training." The goal of the project is to determine the continuing education and training needs of frontline community health workers in the Las Vegas Valley; particularly in regards to finding, providing, and evaluating appropriate consumer health resources.

IV. Faculty Information and Productivity

5. Evaluate trends in the following areas
    a. Composition of full-time faculty

Undergraduate and Graduate Programs

There are 20 full-time faculty members in Kinesiology. Fourteen of the Kinesiology faculty members are male (70%), and the most common rank is tenured associate professor. This group makes-up 30% (n=6) of Kinesiology's instructional faculty. There are three full professors (15%), four lecturers (20%, with two at senior level), four professors-in-residence (20%, with one associate and three assistant), two visiting assistant professors, and one tenure-track assistant professor. Seventeen of the 20 (85%) Kinesiology faculty members have the highest terminal degree, PhD. All professors-in-residence, visiting assistant professors, and lecturers teach only at the undergraduate level.

One area of concern with regard to faculty composition is the recent retirement of a distinguished professor, Dr. Gabriele Wulf. This professor has crucial expertise in motor learning and taught at both the graduate and undergraduate levels. The gap has been temporarily filled with a visiting assistant professor, but this is not a sustainable long-term solution. Concurrently, the university budget poses a major barrier in obtaining funding to support a new tenure-track position. Conversations with administration and program faculty will determine how to manage this deficit in the coming semesters.

b. Productivity

Percentage of Credit Hours Taught by Full-Time Faculty

Semester	Undergraduate Kinesiology Credit Hours Offered	Undergraduate Credit Hours Taught by KNS Faculty	Percentage of Credit Hours Taught by KNS Faculty	Graduate Kinesiology Credit Hours Offered	Graduate Credit Hours Taught by KNS Faculty	Percentage of Credit Hours Taught by KNS Faculty
Spring 2023	11167	8134	72.8%	180	180	100%
Fall 2022	12124	7408	61.1%	189	189	100%
Spring 2022	11476	6819	59.4%	184	184	100%
Fall 2021	12456	7885	63.3%	192	192	100%
Spring 2021	12013	6686	55.7%	147	147	100%

Undergraduate Program

As seen above most of the 11,167 to 12,124 undergraduate credit hours are taught by full-time faculty, ranging from 61% to 73% in the past academic year. The remaining portion is typically taught by part-time instructors and graduate assistants.

Graduate Program

On the graduate credit hours side, 100% of the 180 to 189 credit hours are taught by full-time faculty. Note that most of graduate faculty also teach undergraduate courses or courses in PhD programs that extend beyond the Department of Kinesiology and Nutrition Sciences, namely the Neuroscience PhD program and the Interdisciplinary Health Sciences PhD program.

General Education Credit Hours Generated by program faculty

KIN 223 and KIN 224 (Human Anatomy and Physiology I & II) are large service courses that serve as prerequisites for most healthcare-related programs and are required courses for the undergraduate Kinesiology major. Typically, KIN 223 has more than 600 students enrolled each semester in lecture and laboratories (4 credit hours total), while KIN 224 has more than 400 enrolled students in lecture and laboratories (also 4 credit hours total).

Statistics for Health Sciences, KIN 200, enrolls more than 300 students each semester. As with KIN 223 and KIN 224, KIN 200 satisfies a requirement for students pursuing degrees in Integrated Health Sciences. Program faculty also teach HSC 100 (Introduction to Academia and Scholarship in Health Sciences) with more than 100 students enrolled in lecture and discussion sections (2 credit hours total).

c. Scholarship (Gathered by Department)

Publications/Creative Activities: Selected recent publications from our faculty are listed in Appendix A with Kinesiology program faculty authors in bold. Student first authors are underlined.

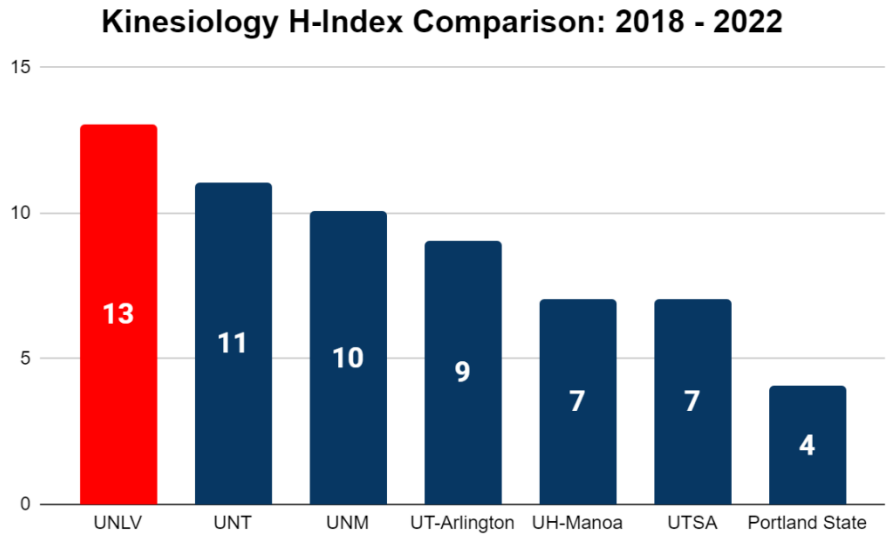
Undergraduate and Graduate Programs

Kinesiology faculty scholarly activity in the form of peer-reviewed publications has included a variety of research types, ranging from clinical trials to review articles, systematic reviews, meta-analyses, observational studies and conceptual papers. This represents a wide range of topics related to exercise science and kinesiology.

Some of the specific topics that are covered include:

- The effects of exercise on different health outcomes, such as physical fitness, body composition, and mental health.
- The development and validation of new exercise interventions.
- The use of wearable technologies to monitor and assess physical activity.
- The biomechanics of human movement.
- The psychology of exercise behavior.
- The prevention and rehabilitation of sports injuries.

Kinesiology faculty have robust publication activity as calculated by the h index. This index is a standardized measure of academic impact that compares publications to citations. Kinesiology faculty at UNLV outperform many Kinesiology faculty at peer institutions over the last five years with a five-year index score of 13. The University of North Texas was the closest peer institution with a score of 11. Kinesiology faculty at five of the six peer institutions had an h-index score of ten or below.



Most of the recent Kinesiology faculty publications appear in journals with Clarivate Journal Citation Report impact factors in the 2.0 to 4.0 range. Several notable exceptions follow. The 2022–2023 Journal Impact Factor of European Reviews of Aging and Physical Activity is 6.65. Journal Impact Factor of Frontiers in Endocrinology is 6.06. Obesity Reviews has an impact factor of 10.87, while Diabetes Research and Clinical Practice has an 8.18. JAMA Network Open's Journal Impact Factor is 13.8. The Journal of Sport and Health Science is one of the

leading scientific journals in sport, exercise, physical activity, and health science with a Journal Impact Factor of 13.08.

Grant Applications/Grant Funding Awarded: Selected recently awarded extramural funding is listed below. All of these funded projects will involve research assistants from our undergraduate and/or graduate programs.

Undergraduate and Graduate Programs

Graham McGinnis (Kinesiology and Nutrition Sciences) was recently awarded an NIH R16 SuRE FIRST grant titled, "Effects of time-of-day dependent exercise training on social jet lag induced susceptibility to cardiometabolic disease," for $747,500 over four years. This grant, supported by NIGMS, will investigate how social jet lag, a novel and pervasive form of circadian rhythm disruption caused by shifting sleep/wake times between weekdays and weekends, contributes to obesity and cardiovascular disease. They will also determine if exercise at specific times (morning or evening) is capable of reversing the harmful effects of social jet lag.

Brach Poston (Kinesiology and Nutrition Sciences) and Merrill Landers (Physical Therapy) previously received an R15 grant from the National Institute of Neurological Disorders and Stroke, through the National Institutes of Health, for their study “Long-Term Transcranial Direct Current Stimulation in Parkinson's Disease.” The project sought to determine the influence of transcranial direct current stimulation on long-term motor learning, transfer of motor learning, and cortical function among patients with Parkinson’s disease. The $420,000 grant provided funding for their work over three years.

Richard Rosenkranz (Kinesiology and Nutrition Sciences), with colleagues based at Louisiana State University, received an R15 grant from the National Institutes of Health for a study “Dissemination of an Adolescent Obesity Prevention Intervention to Louisiana Schools.” The goal of this R15 project is to disseminate the evidence-based SWITCH–MS intervention to Louisiana. The re-branded Louisiana-based Preventing Obesity Using Digital-assisted Movement and Eating (ProudMe) will retain the effective, school-based components of the SWITCH–MS but will also receive theory-informed, novel adaptations to integrate technology-based components tailored for the more racially diverse populations in Louisiana. The total budget of this project is $451,182 over three years.

Other

Graduate Program

Graduate faculty members are very active in attending and presenting at the American College of Sports Medicine (ACSM) conferences, at both the regional and national levels. Besides ACSM, some faculty attend the annual conferences National Strength and Conditioning Association conference, National Athletic Training Association, The International Society of Behavioral Nutrition and Physical Activity, Military Health System Research Symposium, and others. Faculty members also frequently send graduate students to these conferences to deliver presentations and for professional development. Within Appendix A, there are nine examples of

peer-reviewed publications led by graduate student authors (underlined text) with support of their Kinesiology graduate faculty mentors.

d. Teaching/Service (Gathered by Department)
Innovative teaching practices

Undergraduate and Graduate Programs
Kinesiology faculty prioritize engaged, hands-on learning that emphasizes practical application, group projects, rich discussions, and technology The result is a problem-solving environment that embraces individual and group projects allowing students to fuse technical skills with creative skills. For example, students have built evidence-based websites to address specific informational needs for groups in the community (e.g., Walk-It Science).

In many classes, Kinesiology adopts a hands-on approach where students act as investigators with a leadership role in their learning. Students may demonstrate specific techniques or guide their peers through an activity. Graduate students contribute to the learning process by providing on-on-one guidance, answering questions, or asking students to critically assess their process or assumptions. This format challenges students in a supportive, growth-oriented environment, which augments their confidence and critical-thinking skills.

Technology also functions as an internal component of the learning process enabling students to complete sophisticated simulations. Two Kinesiology faculty members harnessed podcasts as a mechanism of communicating information to students. This forum capitalizes on a flexible learning environment so that students can control the time and pacing of their learning. They can listen in their car, at 2x speed, or repeat parts of the podcast that were confusing.

Faculty members also have made use of video in creative ways, such as recording interviews or discussions of real-world applications of Kinesiology. One example of this approach is an interview of Dr. Beren Shah, who is a graduate of the Kinesiology program and UNLV graduate program in physical therapy. Dr. Beren Shah started a local mobile physical therapy clinic providing therapy sessions to people in their homes, jobs, or even the Las Vegas strip. Kinesiology professors also facilitated a group discussion with HOKA (running shoe company) regarding running shoe research and development. The Kinesiology Youtube channel also featured a discussion with KIN Alumni Mufaro Hungwe who was working in the shoe industry. She explained her path through the undergraduate and graduate programs here at UNLV and how she navigated finding her career path. This approach to knowledge delivery helps students envision how they can transfer their educational experiences into a variety of career opportunities.

In the Biomechanics of Endurance Performance course, students work throughout the semester on a project to develop a 3-min video presentation. The presentation is focused on answering a specific question using database research. In many cases, students need to demonstrate functional anatomy knowledge when presenting information related to the question. For example, in this presentation, the student was addressing the question of what seat height

should be used during cycling. As such, he discussed information about joint movements related to physiological measures, for example.

During COVID, the Office of Information Technology outfitted more than 60 classrooms with technology to allow synchronous online and in-person instruction. This program, dubbed RebelFlex, started with an initial pilot in the fall of 2021 and a second pilot in spring 2022. Approximately 21 faculty members participated in the initial trial for this process. Two Kinesiology faculty members, Leonardo Lozano and Kara Radzak, volunteered for the trial in the fall, and four professors in Kinesiology participated in the spring pilot. As spring pilot approached, Professor Lozano volunteered to participate in a recruitment webinar to demonstrate how he created a project-focused learning environment in the RebelFlex format.

This broad embrace of a new learning technology by multiple faculty members in Kinesiology shows a willingness to adapt and experiment to find new ways to engage students in a dynamic environment. Student surveys revealed that this format was well-received because it addressed a vital need in the pandemic environment. The ability to “flex” and attend online when necessary was extremely valuable to students with approximately one-fifth of student respondents reporting that they changed their mode of attendance during each trial semester. In almost all instances, students reported that they changed their mode of attendance from in-person to online due to illness, transportation problems, or other family obligations. In both student surveys, approximately 80% of student survey respondents reported that they would like to take more courses in this format.

Graduate Program

Mentorship plays an important role for the M.S. program as students work with their committees to apply skills in creative and novel ways to solve research problems. The guided and collaborative nature of this research often evolves into conference presentations for M.S. students and peer-reviewed publications. At the most recent Southwest American College of Sports Medicine conference, four M.S. students were primary or co-authors on 10 presentations, mentored by three separate departmental faculty members. As a result of effective mentoring, at least two M.S. students were successful in publishing their thesis or professional papers last year.

- Gardner, C., Navalta, J.W., Carrier, B., Aguilar, C.D., Perdomo Rodriguez, J. Training Impulse and Its Impact on Load Management in Collegiate and Professional Soccer Players. *Technologies* 11:79, 2023. DOI: https://doi.org/10.3390/technologies11030079
- Malek, E.M., Navalta, J.W., McGinnis, G.R. Time of Day and Chronotype-Dependent Synchrony Effects Exercise-Induced Reduction in Migraine Load: A Pilot Cross-Over Randomized Trial. *International Journal of Environmental Research in Public Health,* 20, 2083, 2023. https://doi.org/10.3390/ijerph20032083

Teaching or Service Awards

Undergraduate and Graduate Programs
Distinguished Teaching Award: Van Whaley, Integrated Health Sciences, UNLV
Distinguished Teaching Award: Sharon Jalene, Integrated Health Sciences, UNLV
Distinguished Teaching Award: Michelle Samuel, Integrated Health Sciences, UNLV
Distinguished Teaching Award: John Mercer, Integrated Health Sciences, UNLV
Special Service Award: Michelle Samuel, Nevada Athletic Trainers' Association
Special Recognition (Service) Award: Michelle Samuel, Far West Athletic Trainers' Association

Faculty/Student Collaborations

Undergraduate and Graduate Programs
Kinesiology faculty and graduate students collaborate to produce a comprehensive and enriching learning experience. This environment generates multiple layers of mentorship as graduate students are mentored by experienced faculty members, and undergraduate students are mentored by graduate students. This partnership yields a rich, multi-faceted learning experience wherein students learn from each other within a practical application framework. The result is a student-centric learning experience in which graduate students gain experience in developing content that aligns with course objectives and implement these components within a live classroom environment. Graduate students are excellent models for their undergraduate peers because they recently went through the same academic process, and they provide relatable and practical insights as they guide them through laboratory activities and research projects. Following are two entries that Dustin Davis (graduate student) and a faculty member submitted to the Best Teaching Expo Poster Fair:

- Hands-on, Eyes-off Learning (2020)
- Remote Learning (2022)

The practice of faculty/student collaboration extends to research projects. In a majority of cases, Kinesiology faculty members are principal investigators on research projects. They are tasked with leadership components, such as project design and management tasks, while students assist with research-oriented tasks, such as gathering and summarizing data. The outputs of these collaborations include professional papers and theses that serve as capstone projects for student degree programs. Those outputs also often include conference presentations, published abstracts and peer-reviewed journal articles. Selected recent publications from our faculty in collaboration with student first authors are listed in Appendix A (see underlined).

Community Engagement Activities

Undergraduate and Graduate Programs
On the UNLV campus, Kinesiology faculty facilitated a 3-day event emphasizing physical activities for students during study week. This event, Fitness 4 Finals, is a campus engagement activity designed to relieve stress and enhance focus and cognition for final exams. Since Integrated Health Sciences operates the UNLV Food Pantry, Kinesiology students participate in community engagement volunteer projects related to food insecurity in the Las Vegas area such as a monthly Farmer’s Market event. The UNLV Food Pantry mostly serves UNLV students; so,

about 70% of available food goes to them, and the rest goes to university employees. Kinesiology faculty also supports UNLV students through the Kinesiology Club, UNLV Triathlon Club, and other student organizations.

The Lake Las Vegas Sports Club℠ is home to the UNLV Sports Science Center and provides funding to support a graduate assistantship for a M.S. Kinesiology student. The sports club is a location for collaboration in research, education and guest presentations from leading fitness industry professionals and internationally recognized science-based exercise, physiology and kinesiology experts. As an extension of UNLV, club members have access to state-of-the art equipment, as well as health and fitness assessments.

The Department of Kinesiology and Nutrition Sciences provides sponsorship support to the Las Vegas Triathlon Club. Two faculty members, Dr. John Mercer and Tedd Girouard are heavily involved with the club, with Dr. Mercer currently serving as club president. These two also host a podcast, the Evidence-Based Triathlete, which has attracted many listeners in Las Vegas and well beyond Nevada.

V. Student Success

6. Reflect on student success metrics provided.
    a. Which metrics are points of strength for the program?

Undergraduate Program

Graduation rates are a strength of this program, with Kinesiology students tending to graduate from UNLV at higher rates than their peers. Using a multi-year average, undergraduate students who started in Kinesiology graduated at UNLV at a higher rate than the total bachelor's seeking cohort, 49.8% vs. 45.3%. Kinesiology students also graduate in their starting program at a higher rate than the total cohort graduates in their starting college, 35.3% vs. 26.8%. Across most ethnic categories, students who started in IHS graduated in their starting college at higher rates than the total cohort. The local impact from this includes approximately 75% of Kinesiology bachelor's graduates working in Nevada in the year following graduation.

Another strength is the size of the program, with Kinesiology BS representing 4.5% of UNLV's bachelor's seeking population and 64% of the Integrated Health Sciences enrollment. While enrollment in Integrated Health Sciences declined by 13% over the current five-year period, undergraduate enrollment in Kinesiology remained stable, decreasing by approximately 1% or ten students. This enrollment change is slightly better than the institutional trend, which showed a decrease of 1.5% in UG bachelor's seekers. Of the 4,690 UNLV Bachelor's Degrees earned in 2021-2022, 315 were Bachelors in Integrated Health Sciences and 219 were in Kinesiology.

The number of Pell recipients in Kinesiology increased by 28%, which is higher than the UNLV rate of increase of 15%. This means that over five years, the proportion of Kinesiology students who are Pell recipients rose from 31% to 40%. The number of non-Pell recipient students in Kinesiology decreased by 14% from 759 to 655 students. In both the total cohort and

Kinesiology, non-Pell students retain in their original college at slightly higher rates than Pell students.

There are three questions on the Senior Exit Survey where the proportion of Kinesiology students selecting strongly agree or strongly satisfied was more than 5 percentage points higher than the UNLV total. These results indicate that graduating Kinesiology students feel they acquired the knowledge/skills they need in their career, that classes in major are academically challenging, and there is diversity of faculty and staff. Survey results also indicate that senior Kinesiology students spent less time preparing for class than their peers in other programs. This finding is likely related to the trajectory of Kinesiology students who transition to working or volunteering in the field as they near the end of their program. This real-world experience reinforces their knowledge and helps them transition from the academic realm into professional capacity.

Graduate Program

A strength of this program is that the department is able to provide graduate assistantships to a selection of well-qualified students to support their education as they contribute to teaching and research within the program. In particular, several graduate assistants often provide laboratory support in KIN 346 Biomechanics and KIN 391 Exercise Physiology in each semester. Since two of the focal areas in the M.S. program are biomechanics and exercise physiology, there are usually mutually fitting opportunities for students and their major professors. Although the enrollment numbers have dropped over the past 5 years, one strength is that the M.S. program has survived the COVID-19 pandemic, and the M.S. program has a number of highly qualified applicants each year. During the time period between 2017 and 2021, 88% of M.S. students retained at UNLV from Fall to Fall, and 85% of the M.S. students retained the Kinesiology major. Both of those metrics outperformed UNLV (82% and 81% respectively).

b. Are there areas of concern for the program?

Undergraduate Program

Regarding retention at UNLV, regardless of original department, Kinesiology students retain at UNLV at slightly lower rates, 74%, than overall UNLV retention 77.9%. For Kinesiology, there is only a small gap in retention between minority/non-minority students in their starting college. Minority students retain at a slightly higher rate (65.4%) than non-minority students (62.2%). These retention rates are higher than rates in Integrated Health Sciences, and they are equivalent to the starting college retention rates for the total cohort.

Recently, there has been a decline in Kinesiology degree production. The decline is concentrated in bachelor's degrees earned by non-minority students, which declined 23% over the five-year period. In contrast, bachelor's degrees earned by minority students showed a 2% decline over this period. Interestingly, in the COVID years, the number of bachelor's degrees earned by minority students was remarkably high, 183 degrees in AY 20-21 and 179 in 2019-20. Thus, the decline in the number of bachelor's degrees earned by minority students is actually a return to pre-pandemic trends wherein minority students generate approximately 155

Kinesiology bachelor's degrees. The trend in Kinesiology bachelor's degrees is somewhat different than the UNLV trend, which showed strong growth in bachelor's degrees with an increase of 24.5% in bachelor's degrees earned by minority students.

Maintaining rigor despite grade inflation is a challenge that educators at all levels face. Grade inflation is the tendency for grades to increase over time, regardless of student achievement. This can erode the value of a degree and make it difficult to assess student learning. There are a number of things that educators can do to maintain rigor in the face of grade inflation. One important step is to have clear and transparent grading standards. This means having clear rubrics for assignments and exams, and grading all students to the same high standards. It is also important to avoid grade curves, which can artificially boost student grades. Another way to maintain rigor is to use assessments that require students to demonstrate critical thinking and problem-solving skills. This includes assessments such as essays, research papers, and projects. Avoid using assessments that can be easily memorized or cheated on, such as multiple-choice tests. Finally, it is important to create a culture of academic integrity in the classroom. This means making it clear to students that cheating and plagiarism are not tolerated. It is also important to have clear policies and procedures in place for dealing with academic misconduct.

Redesign of Curriculum and Learning Outcomes

There are many courses that will no longer be available to B.S. students in Kinesiology because the undergraduate program in athletic training is ending and transitioning to a master's program. There are other concerns regarding the B.S. in Kinesiology learning objectives that are listed below. The courses being possibly removed are listed in the following table and have 29 instances where the course is currently providing support for the LOs indicated on the curriculum map. As the undergraduate Athletic Training program transitions from undergraduate to a master's-level program, it will have a significant impact on the Kinesiology undergraduate program and student choices. This transition requires careful evaluation to determine how the undergraduate learning outcomes and curriculum map will be impacted. The following table shows current courses that may be removed from the undergraduate program and the PLO they are associated with, indicated by Sup for Supports.

Courses Leaving Undergraduate Program and LO Curriculum Map

	LO 1 Careers	LO 2 Anat & Biomech	LO 3 Motor Cont	LO 4 Motor Perform	LO 5 Effects of Exrcs	LO 6 Phys Fitness	LO 7 Nutr & Health	LO 8 Sports Injuries	LO 9 Nutr & Activity	LO 10 Activity & Health	LO 11 Research
Kin 101 AT		Sup				Sup	Sup		Sup		Sup
Kin 102 Intro to AT Clinical											
Kin 201 Exercse and Sport Injury			Sup			Sup			Sup		
Kin 308 Sci Basis Str Devel			Sup	Sup	Sup	Sup	Sup		Sup		
Kin 370 Clinical Exp in AT 1											
Kin 386 Assess & Eval of Lower Extmy			Sup			Sup			Sup		
Kin 387 Assess & Eval of Upper Extmy			Sup			Sup			Sup		
Kin 390 Therapeutic Modalities			Sup			Sup			Sup		
Kin 396 Seminar in Sports Injury											
Kin 458 Org & Admin of AT Programs											
Kin 470 Advanced Clinical Exp AT 1											
Kin 471 Advanced Clinical Exp AT 2											
Kin 480 Therapeutic Exercises											
Kin 482 Advanced AT											
Kin 495 Sports Med		Sup	Sup			Sup			Sup		
Kin 497 Field Exper in AT											
Kin 498 Seminar in AT											

Note: LO = learning outcome; Sup = Supporting indicates the program learning objective supports the university outcome.

- LO 3 and LO 4 Need Refinement/Clarity

These will either be combined into one measurable objective or clarify the difference between the two LOs by more clearly defining biological versus biomechanical and Control versus Performance. Do the majority of our students complete the elective course KIN 456 to meet this objective? On the curriculum map, KIN 312 (Motor Control) is the primary course for LO 3 and KIN 456 is the primary for LO 4.

- LO 7 and LO 9 Are Not Fully Covered

Learning objectives 7 and 9 involve nutrition, yet there are no required NUTR classes in the program. These LOs are at a depth of learning and specificity (7=Designing a diet, 9=Needs of a competitive athlete) that is probably outside the curriculum of current Kinesiology courses. On the curriculum map, NUTR 121 is the primary course for LO 7 and NUTR 340 is primary for LO 9 and LO 11.

- LO 11 Research in More Courses Than Documented

Research is an integral part of the Kinesiology curriculum, and program faculty will meet to clarify how this content aligns with the course structure. A key question for discussion is where Kinesiology undergraduate students are introduced to data analysis (perhaps KIN 200 statistics) and which other courses cover research review and research-based assignments.

- LO 8 Not Fully Covered After AT Program Update

Learning objective 8 will soon not be as thoroughly supported because the undergraduate Athletic Training Program is replaced by the Master's Degree. Treating injuries and designing risk management strategies may be outside of the curriculum. In the near future, all these courses that support LO 8 could be removed from the undergraduate curriculum:

KIN 101 - Athletic Training
KIN 201 - Exercise and Sport Injury
KIN 386 – Assessment and Evaluation of Lower Extremity
KIN 387 - Assessment and Evaluation of Upper Extremity
KIN 390 - Therapeutic Modalities
KIN 396 - Seminar in Sports Injury

<u>Graduate Program</u>

On the graduate program side, the M.S. in Kinesiology enrollment declined 25% (from n=46 to n=34) since fall 2018, compared to a similar enrollment decline of 26% for Integrated Health Sciences master's students. Notably, master's enrollment at UNLV declined only 3% over this same period from 2,698 to 2,618. At UNLV, the number of minority students pursuing master's degrees rose 18% to offset declining enrollment by non-minority students. The decline in Kinesiology M.S. enrollment is driven by declines in non-minority (white, non-Hispanic) students with 38% decline over this period. Master's enrollment of non-minority students at UNLV declined 15% over this same period.

One-year retention rates among the 2017 to 2021 cohorts have averaged 85% within the same major and 88% in a major at UNLV. Both of those are positive indicators for the program. In comparison, the values are 81% and 82% among all UNLV master's students for retention within the college or school and within UNLV.

Besides enrollment concerns, there are concerns regarding how M.S. students are transitioning into the workforce. It may be important to reevaluate how well recent graduates are competing for professional positions and how well prepared they have been through their education to begin their careers. Some questions include whether there are marketable micro-credentials or other documented skills and experiences that could be provided during graduate education to

enhance the graduate students' marketability beyond UNLV. Graduating M.S. students who continue their education in doctoral level programs appear to be thriving with examples of success in UNLV's doctorate of physical therapy program and other professional-level programs.

c. Describe changes or improvements would you like to see in student success metrics?

Undergraduate Program

Student success is of primary importance in the Kinesiology program. One area that has been identified for improvement is student scores on Human Anatomy & Physiology Society's Comprehensive A&P Exam. This standardized test provides a comparison between UNLV Kinesiology students and their peers at other institutions.

Recent data suggest that spring 2023 students performed better on this assessment than students in spring of 2022. Part of this difference in performance may be related to course delivery practices during the COVID emergency. In December and January of 2021, there was a large surge in COVID cases that changed course delivery formats. Both KIN 223 and KIN 224 courses used online instruction and online exams during this period, and standardized test scores were lower than previous administrations. Both courses were 100% online from summer 2020 to summer 2022. From Fall 2022 to Summer 2023, the format change to accommodate online lectures with in-person labs once per week. Exams were completed in 6 of the in-person lab meetings. The format has been modified for fall 2023 with live lectures once per week and complete exams in the lecture hall. The lab structure will remain in the face-to-face format.

In spring 2023, lectures were conducted online with in-person labs and exams, and the preliminary results are promising because 44.9% of UNLV Kinesiology students passed the Comprehensive A & P exam. Although this rate is still below the average for 4-year schools with grad programs (46.15%), the spring 2023 average is almost 4 percentage points higher than the spring 2022 scores. The spring 2024 courses will continue to use formats established in spring of 2023 to evaluate the durability of this improvement. Unfortunately, the HAPS exam does not provide detailed feedback on specific areas, so the program only receives a global score out of 100 points.

2022 Human Anatomy & Physiology Society's Comprehensive A&P Exam Results

- 46.99 = Average Score for all 2022 HAPS Exam (n=1,053 institutions)
- 46.15 = Average Score of 4-year schools with grad program (54% of institutions)
- 40.62 = UNLV Spring 2022 Average (All classes online, exams online)
- 44.90 = UNLV Spring 2023 Average (Online lecture, In-person lab, exam in lab)
- UNLV Spring 2024 is planned (in-person lab, hybrid in-person lectures, exams in lecture)

Graduate Program

Although there are limited data, program faculty would like to see improvement in student outcomes on the NSHE Workforce Data. These include average annual salaries among those

who are employed in Nevada during the 4 quarters after graduation. Although the data are sparse and of uncertain quality, the average annual salaries range from as low as $15,130 to $38,208. Even the higher value there is pitifully low, while the lower value is near poverty.

VI. Assessment

7. The undergraduate program has an assessment index score of 13/14. Identify areas to improve/enhance the assessment score

Undergraduate Program

The 2022-2023 Undergraduate in Kinesiology Program Assessment report earned a strong assessment score of 13/14. This score suggests that the assessment report has almost all the vital elements of a successful assessment plan, including measurable verbs, at least one direct measure of student learning, a rubric, and reported data. The report details current program contents and includes a plan to engage the faculty in evaluating changes and updates to the undergraduate program. The strength and focus of this assessment was the in-depth analysis of Program Learning Objectives (PLO) and their need for revision to match current changes within the program. The need for faculty review of all PLOs was first reported on the 2021-2022 program assessment and will be a focus of program development during 2023-2024.

Undergraduate Program Learning Objectives and Assessment Schedule

Kinesiology Undergraduate Program Learning Objectives (LO)	**Assessment**
LO 1. Recognize Kinesiology career options.	July 2024
LO 2. Demonstrate knowledge of functional anatomy and biomechanics.	Current
LO 3. Describe the biological foundations of motor control, explain information processing and learning theories, and identify practical concerns relating to enhancement of motor performance.	Current
LO 4. Explain the biomechanical principles that underlie human motor performance.	July 2024
LO 5. Specify the physiological response to exercise and describe the systemic adaptations that occur at rest and during submaximal and maximal exercise following chronic aerobic, anaerobic, and strength training.	Assessed in 2021
LO 6. Demonstrate knowledge of and ability to discuss the physiological basis of the major components of physical fitness, and develop individual fitness programs.	Assessed in 2021
LO 7. Evaluate current concepts in nutrition in relation to health and disease, and apply guidelines for designing a healthy diet.	July 2025

LO 8. Explain acute care of sport-related injury and illness, and design risk management and injury prevention strategies.	Current
LO 9. Evaluate popular nutrition practices utilized by competitive and recreational athletes, focusing on dietary assessment, scientific validity, and efficacy.	July 2025
LO 10. Explain the risk factor concept of disease and the role of physical activity in modifying risk factors.	July 2024
LO 11. Analyze and evaluate research data.	July 2025

Faculty discussion and input are needed for several issues related to the PLOs. During Fall 2023, all faculty will receive an invitation to attend the first Undergraduate Curriculum Meeting of the 2023-24 year to discuss the recent annual Kinesiology assessment plan, the program, and review short and long-term needs. These meetings will continue throughout the academic year. To begin this process, the Kinesiology Undergraduate Coordinator will present the issues below to the faculty. Additionally, all faculty will be surveyed and asked for their input listing the course(s) they teach and the PLOs they support. They will also be asked if there is a need to better define a LO associated with this course. These LO issues will be openly discussed during future faculty meetings.

Graduate Program

The M.S. Kinesiology students need opportunities to develop skills such as critical thinking, quantitative reasoning, and understanding research design. With the short timeframe that these graduate students have, recruiting students who already possess some of these qualities may be helpful. A common theme in our evaluation comments have been that students need more practice and guidance in performing a review of relevant literature. This may be a byproduct of the increased focus on PhD students being mentored by faculty in our department, and the competing time interests that ensue.

From a program perspective, we need to modify the forms of assessment where we collect data. Specifically, there is a need to update how the biomechanics content is collected. We have proposed that the new course be KIN 656, Biomechanics of Endurance Performance, which most students take. There may also be a need to update the motor learning course (KIN 760), as the instructor has retired. Finally, there is a need to update how information related to scholarly productivity is collected, either a survey directly to the students or to their advisors.

8. Describe how assessment findings have been used to identify gaps or weaknesses in student learning. What changes were made to address these issues?

Undergraduate Program

Several changes to the Undergraduate Kinesiology Program have been made or are in the process of being implemented based on needs identified by formal and informal assessments. In addition to the PLOs, faculty spent the 2022–23 year reviewing specific courses as to how they fit in required or elective categories. All required courses were discussed by faculty to ensure they are needed for program success and apply to all students. Faculty also discussed the electives and possibilities of moving courses between the required and elective categories. There was no agreement and no faculty vote was made on this topic.

For the last few years, the BS in Kinesiology program required 27 upper-division (numbered 300 to 499) elective courses. During Spring 2023, an update lowering this by 6 credits was unanimously approved by the faculty. This update will go into Curriculog with implementation scheduled for fall semester of 2024. Lowering the number of required upper-division elective courses from 27 to 21 was driven by student feedback. Students graduating with a B.S. in Kinesiology were not meeting all prerequisites for several healthcare-related fields. This reduction in KIN-specific courses provides students with the opportunity to take Math 181 and 182 (Calculus 1 and 2), physics, and chemistry courses, so they meet prerequisite requirements for their next program.

The faculty is also generating a list of Upper Division courses outside of Kinesiology that can be acceptable credit towards graduation requirements. For example, many Kinesiology students share an interest in Nutrition 340 Introduction to Sports Nutrition, so this course is commonly accepted. This process of identifying upper-division courses outside of the Kinesiology Department that can benefit students will continue with inquiries made to graduating students, common programs our students continue into, and the HIS Advising Department.

Assessment findings and feedback from students have also shaped the teaching formats of many Kinesiology courses. Kinesiology is largely dominated by face-to-face courses with 76% of sections meeting in-person in Fall 2023. However, the number of online and hybrid sections in Kinesiology increased by 215% from Fall 2019 to Fall 2023 based on student feedback and demand. For example, students were offered the choice to enroll in some courses in either online or face-to-face formats, and the results were used to prepare the next term's schedule. The online classes generally filled before the in-person options suggesting that students have a preference for online courses.

Course formats and student outcomes will be monitored and changes made as necessary. Three courses have a difference of more than four percent in the DFWIC- rate in more than one semester: KIN 200 (Statistics), KIN 309 (Essentials of Personal Training), and KIN 424 (Professional Development). Differential outcomes suggest that these courses need to be evaluated to ensure consistent expectations and experiences across different modalities. If the

courses are similar in these areas, the program may seek assistance from the Office of Online Education to determine how to optimize online delivery.

For one course, KIN 309, Essentials of Personal Training, the difference was consistent with the online students having a higher DFWIC- rate than face-to-face (F2F) students. The advanced exercises and movements in this course may not translate to an online format and will likely return to in-person during the next offering. In the other two courses, the differences are not consistent. Thus, in KIN 200, Statistics for Health Sciences, the F2F course had the higher DFWIC- rate in fall 2021 and spring 2022. In the fall of 2022, the online course had a higher DFWIC- rate. KIN 424, Professional Development in Kinesiological Sciences, showed a higher DFWIC- rate online in fall 2021 and spring 2023, and a higher rate for F2F students in spring 2022.

Graduate Program

The M.S. program is advancing the use of assessment to identify gaps or weaknesses in student learning. Informally, program faculty observed that students have deficits in their understanding of research methods, statistical analysis, and scientific communication. Although students show progress during graduate courses, some students are entering the final phase of the program without the requisite skills and knowledge to begin a professional paper or thesis study.

VII. **Curriculum**

9. How complex is the curriculum? Are there a lot of prerequisites or corequisites that are no longer vital/or may prevent student progress? Are any of the required courses on the high-fail rate list?

Undergraduate Program

For the undergraduate degree program, there is a good flow from prerequisites through course progress during the program. This will continue to be reviewed as the Athletic Training program transitions from an undergraduate to a graduate program. More than a dozen undergraduate kinesiology courses (listed in Section VI) will likely not be offered after 2025.

The curriculum and course design complexity is evident in the number of credit hours completed by non-KIN majors. Many KIN courses support other programs, such as almost all healthcare programs requiring KIN 223 and 224. There are abundant “service” demands on the KIN instructors and courses.

During the 10 years being reviewed, BIOL 189 (Fundamentals of Life Science), a prerequisite for KIN 223, Human Anatomy and Physiology I, has been a bottleneck for Kinesiology students’ progress. The advising group generated a list of students recently purged from Fall 2023 courses because of not completing prerequisites. Forty-two (42) students were removed from their upcoming KIN 223 course for not completing the Biology requirement. In comparison, 14 students did not progress from KIN 223 to KIN 224 due to poor performance. This suggests that

more support may be needed to assist students with BIOL 189, but that is outside of our domain for the Kinesiology program and could be addressed by advisors or administrators in their college. Other bottlenecks within KIN courses have been reduced dramatically from 2019 to the present.

KIN 223 and KIN 224, Human Anatomy and Physiology I and II, appeared on recent lists of DFWIC- courses, but this could be related to the return of in-person lab meetings that began in Fall 2022. Some students had not attended in-person labs and there was lower than expected attendance. While in-person labs returned in Fall 2022, in-person (hybrid) lectures are resuming in the Fall 2023 term. The outcomes of these courses will continue to be monitored as the new format is implemented.

KIN261 is an elective that has been identified as a high DFWIC- course several times. KIN 261 (Physical Activity in Aging) typically has a course capacity of 50 students and meets online. Making a plan to improve student outcomes is being addressed by the Department Head, Undergraduate Coordinator, and teaching faculty of these courses.

<u>High Rate of DFWIC Courses</u>

Required Courses recently on the High DFWIC- Rate List

- Fall 2022 KIN 224 34% Online
- Fall 2022 KIN 223 33.6% Online
- Spring 2023 KIN 223 23.4% Online

Elective Courses recently on the High DFWIC- Rate List

- Fall 2021 KIN 101 26.3% Face-to-face
- Spring 2022 KIN 101 28.8% Face-to-face
- Fall 2021 KIN 261 48% Online
- Spring 2022 KIN 261 41.9% Online
- Fall 2022 KIN 261 36.7% Online
- Spring 2023 KIN 261 35.3% Online
- Spring 2022 KIN 391 22.7% Online
- Spring 2022 KIN 492 23.8% Face-to-face
- Fall 2021 KIN 496X 26.9% Face-to-face

A “purge” of students who enrolled but did not meet the prerequisites for Fall 2023 courses.
Notes:

- These data are not restricted to students in the undergraduate program.
- Current enrollment in Fall 2023 KIN 223 = 506 students
- Current enrollment in Fall 2023 KIN 223 = 436 students
- Data are interpreted as 42 students not allowed into KIN 223 because of not meeting BIOL 189/190/191 prerequisites.

Course	**# Purged**	**Course Requirements**
KIN 200	10 students	Minimum grade of C in MATH 124 or126 or127 or MATH 181
KIN 223	42 students	“C” or better in BIOL 189 or BIOL 190 A/L or BIOL 191 A/L
KIN 224	14 students	Grade of C or better in KIN 223.
KIN 245	6 students	Grade of C or better in each: BIOL 223 or KIN 223, and KIN 170.
KIN 309	1 student	KIN 245, KIN 224
KIN 312	2 students	PSY 101 & minimum grade of C in KIN 200 or PSY 210
KIN 346	3 students	grade of C in each: KIN 245 and KIN/NUR/Psy 200 or PSY 210
KIN 386	1 students	KIN 201, KIN 245, a grade of “C” in both KIN 223 & KIN 224
KIN 390	1 students	KIN 101, a grade of “C” or better in both KIN 223 and KIN 224
KIN 391	6 students	Grade of C in each: KIN or NURS 200, or PSY 210, &KIN 224
KIN 408	2 students	Min grade of C in KIN 245, KIN 391, and KIN 346
KIN 492	1 student	KIN 224 and KIN 391.
KIN 494	1 student	Minimum grade of C in KIN 346 and KIN 391.

Kinesiology Required Courses & Learning Outcome Curriculum Map

Required Kin Courses	LO 1 Careers	LO 2 Anatmy& Biomech	LO 3 Motor Cont	LO 4 Motor Perform	LO 5 Effects of Exrcs	LO 6 Phys Fitness	LO 7 Nutr & Health	LO 8 Sports Injuries	LO 9 Nutr & Activity	LO 10 Activity & Health	LO 11 Research
Kin 150 Emergy Mgmt.		Sup			Sup			**Pri**			
Kin 170 Intro to Kin	**Pri**	Sup	Sup	Sup	Sup	Sup				Sup	Sup
Kin 200 Statistics											
Kin 223 Anat & Phys 1		Sup	Sup		Sup					Sup	
Kin 224 Anat & Phys 2		Sup	Sup		Sup				Sup	Sup	
Kin 245 Anatomical Kin		Sup		Sup							
Kin 312 Motor Control			**Pri**								
Kin 346 BioMechanics		Sup		Sup							
Kin 350 Social…Activty	Sup				Sup	Sup				Sup	Sup
Kin 391 Exercise Phys					**Pri**	Sup				Sup	

Note: LO = learning outcome; Pri = primary; Sup = Supporting indicates the program learning objective supports the university outcome.

Kinesiology Elective Courses & Learning Outcome Curriculum Map

Elective Courses	LO 1 Careers	LO 2 Anat & Biomech	LO 3 Motor Cont	LO 4 Motor Perform	LO 5 Effects of Exrcs	LO 6 Phys Fitness	LO 7 Nutr & Health	LO 8 Sports Injuries	LO 9 Nutr & Activity	LO 10 Activity & Health	LO 11 Research
Kin 175Activity&Health		Sup			Sup			**Pri**			
Kin 261 Activity&Aging					Sup	Sup				Sup	
Kin 309 Esnt.of Per Train	Sup	Sup		Sup	Sup	**Pri**		Sup		Sup	
Kin 316 Motor Devel.			Sup								
Kin 424 Prof Develop	Sup										
Kin 456 Biomechns of Endur Perform		**Pri**		**Pri**				Sup			
Kin 457 Phys of Endur Perform		Sup			Sup	Sup		Sup			
Kin 465 Neurophys of Movement			Sup								
Kin 475 Sport&Fit Mgmt	Sup										
Kin 490 Internship	Sup										
Kin 492 Clinic Exrc Phys				Sup	Sup	Sup	Sup			**Pri**	
Kin 493 Apld Exrc Phys	Sup				Sup	Sup					Sup
Kin 499 Independ Study											
Nutr 121 Human Nutrition							**Pri**				
Nutr 301 Nutrition, Health, & Ethical Issues							Sup		Sup		
Nutr 340 Intro to Sports Nutrition							Sup		**Pri**		**Pri**

Note: LO = learning outcome; Pri = primary; Sup = Supporting indicates the program learning objective supports the university outcome.

Kinesiology Courses and UULO Curriculum Map

University Undergraduate Learning Outcomes	Assessment Timeline
1. Intellectual breadth and lifelong learning.	2023 - Current
2. Inquiry and critical thinking.	Assessed in 2021
3. Communication (Academic literacy, technologies).	2024 - Next
4. Global/multicultural knowledge and awareness.	Follow in 2025
5. Citizenship and ethics.	Follow in 2025

Mapping the Learning Objectives and University Undergrad Learning Outcomes

	UULO 1	UULO 2	UULO 3	UULO 4	UULO 5
LO 1. Careers	SUP		SUP	SUP	SUP
LO 2. Anat & Biomechanics	SUP	SUP			
LO 3. Motor Control					
LO 4. Motor Performance		SUP	SUP	SUP	
LO 5. Effects of Exercise	SUP		SUP	SUP	SUP
LO 6. Physical Fitness	SUP		SUP	SUP	
LO 7. Nutrition & Health		SUP			
LO 8. Sports Injuries					
LO 9. Nutrition & Activity	SUP	SUP	SUP	SUP	SUP
LO 10. Activity & Health	SUP		SUP	SUP	SUP
LO 11. Research	SUP	SUP	SUP	SUP	SUP

Note: LO = learning outcome; Sup = Supporting indicates the program learning objective supports the university outcome

Graduate Program

With regard to curriculum, the M.S. in Kinesiology is not overly complex. There is ample flexibility regarding course selection, and most courses are taught on a frequent enough schedule to allow students to progress without bottlenecks or sequencing problems. That said, availability of some courses could be problematic if faculty members were to take sabbatical, retire, or move to another institution. The program has some courses where it would be difficult to find a replacement—an issue highlighted by the retirement of the faculty member who taught KIN 760 Motor Skill Learning and Performance. Thus, the tenuous relationship between staffing and specialization underscores the fragility of adjusting staffing needs in a department with lean staffing.

10. Are all required courses offered on a regular schedule? Please identify required courses and describe the teaching schedule. Does the mix of course sections, days, times, modalities meet student needs?

Undergraduate Program

Yes, all of the required courses are offered on a regular schedule. These are listed here.

KIN 170 - Introduction to Kinesiology
KIN 150 - Emergency Management of Injuries and Illness
KIN 200 - Statistics for the Health Sciences
KIN 245 - Anatomical Kinesiology
KIN 312 - Motor Control and Learning
KIN 346 - Biomechanics
KIN 350 - Social Psychology of Physical Activity
KIN 391 - Exercise Physiology

All required courses are offered at least twice each year (Fall and Spring). Many courses also have a summer term offering with a more condensed schedule of either 5 weeks or 3 weeks. Some electives are offered in a carousel manner, such as Upper Extremity Courses offered in the Fall and Lower Extremity offered in the Spring term.

There is room for improvement in the diversity of meeting times for KIN courses, specifically offering more afternoon meeting times. There is also a possibility of the need for evening and Friday courses. The program will continue to monitor enrollment patterns and gather student input about this need.

One program goal is to increase the course options for Kinesiology undergraduate students. Recently, a new elective was created for undergraduates, KIN 496 Advanced Clinical Anatomy. The program is also reviewing three courses to determine their fit within the curriculum:

KIN 172 Foundations of Kinesiology
KIN 440 Human Physiology
KIN 446 Sports & Exercise Biomechanics

Graduate Program

The M.S. in Kinesiology requires 3 credits of biomechanics, 3 credits of motor learning/motor control, and 3 credits of exercise physiology. In addition, the program requires 6 credits of research courses, along with elective courses and an optional thesis or professional paper option. For biomechanics as well as motor control/learning, students can choose one of 4 options to fulfill those requirements. There are 2 options for the exercise physiology requirement. Generally, those options allow students to make good progress within a narrow time frame so that they can finish the degree, even if their preferred course is not taught for some period of time. The research courses are more prescribed, with Research Methods in Kinesiology and Nutrition Sciences Research (KIN 750) and Selected Application of Statistical Techniques I (KIN 751) being the only option. Fortunately, these courses are offered at least

once per year, and the program would prioritize them if there were any disruption to that instruction by the assigned faculty members.

11. How many courses are low yield? Are these low yield courses necessary for degree paths or electives? How much faculty resources are required to maintain these courses? Is there a way to increase yield for these courses?

Undergraduate and Graduate Programs

As listed below, there have been some low-yield courses recently offered, but most of these were part of the Athletic Training program (indicated by * in the following table), which is transitioning from an undergraduate to a Master's-level program. Thus, the majority of these courses are being taught out and will not continue to be offered.

Semester	Course	Enrollment	Modality
Fall 2021	KIN 370*	13	In person
Fall 2021	KIN 494	13	In person
Fall 2021	KIN 499	12	In person
Spring 2022	KIN 371*	13	In person
Spring 2022	KIN 102*	11	In person
Spring 2022	KIN 481X	9	In person
Fall 2022	KIN 458*	12	In person
Fall 2022	KIN 470*	12	In person
Fall 2022	KIN 482*	12	In person
Fall 2022	KIN 498*	12	In person
Fall 2022	KIN 370*	11	In person
Spring 2023	KIN 102*	13	In person
Spring 2023	KIN 201*	13	In person
Spring 2023	KIN 387*	13	In person
Spring 2023	KIN 471*	12	In person
Spring 2023	KIN 480*	12	In person
Spring 2023	KIN 495*	12	In person
Spring 2023	KIN 371*	11	In person
Spring 2023	KIN 481X	10	In person
Semester	Course	Enrollment	Modality
Fall 2021	KIN 611	3	In person
Spring 2023	KIN 611	3	In person
Spring 2022	KIN 656	3	Online
Spring 2023	KIN 656	1	Online
Fall 2021	KIN 657	5	In person
Spring 2022	KIN 692	4	In person
Spring 2023	KIN 692	5	In person
Spring 2023	KIN 720	4	In person
Fall 2022	KIN 731	3	In person
Fall 2022	KIN 739	4	In person
Spring 2022	KIN 740	3	In person
Spring 2023	KIN 740	2	In person

Fall 2021	KIN 746	4	In person
Fall 2021	KIN 752	2	In person
Fall 2022	KIN 752	3	In person
Spring 2022	KIN 754	1	In person
Spring 2023	KIN 754	3	In person

Note that 600-level graduate courses are usually taught concurrently with 400-level undergraduate courses that feature much larger enrollments.

12. Is the program planning curriculum changes in the next few years? If yes, please describe these changes.

Undergraduate Program

There have been ongoing discussions and meetings on this topic. Faculty have been central to these discussions, and curriculum meetings were added to the department meeting schedule this past year. Dr. Van Whaley was appointed to be the Kinesiology Undergraduate Program Coordinator in January 2023. He enabled a number of feedback mechanisms to gather data from students, faculty, advising staff, and other departments. The forums included online discussions, open door meetings, formal meetings, surveys, and informal discussions within the department.

The results of this process were presented at the end of the Spring 2023 term, and ultimately the process produced a significant change to Kinesiology Program Requirements. The curriculum change, which reduces the number of required upper division courses in Kinesiology from 27 to 21 credit hours, was approved by faculty vote during the spring of 2023. The proposal is working its way through curricular approvals during the Fall 2023 semester, and it is likely that the curriculum change will be approved.

There are ongoing discussions about adjusting the list of required courses and elective courses. Department faculty have not voted to endorse these changes yet, but the review will continue during the current academic year. The review process will be facilitated by a new 3-year academic assessment plan that will be shared with program faculty in the fall of 2023. Curriculum meetings will also continue as a mechanism to enhance communication and collaboration among program faculty with the goal of optimizing curriculum, course offerings, and assessment to support student success.

Graduate Program

Program faculty in the M.S. program are also considering curriculum changes, but these discussions are a lower priority than the more immediate changes that are required as the Athletic Training program transitions to an M.S. program. The program is currently investigating an International M.S. Clinical Exercise Physiology degree program in collaboration with University of Portsmouth (United Kingdom) and Edith Cowan University (Australia). This is in the very early stages right now, but the opportunity started a conversation about ways to improve the range of experiences and quality of education for M.S. students. This opportunity could also enhance research collaborations among colleagues at those international universities as well.

VIII. **Post-Graduation Outcomes**

13. What do the data documenting student outcomes suggest about the current structure of the program in preparing students to enter the workforce or pursue additional education opportunities?

Undergraduate and Graduate Programs

According to NSHE graduation workforce data, approximately 75% of Kinesiology B.S. students are employed in Nevada in the year after graduation. The average annual salary for graduates entering the job market rose over several years with students who graduated in 2020-21 earning $27,699, which is an increase of 28% over the five-year period.

The UNLV student exit survey provides feedback for students who are nearing the end of their program. With a response rate of approximately 75% for Kinesiology students, the survey is a representative sample of Kinesiology student reflections on their experience in the program as they apply for graduation. The table below displays some data from the survey, which suggests that the program addresses some issues better than the institution in several areas. Thus, Kinesiology students were more likely than their peers to strongly agree that their program helped them acquire knowledge and skills for their career. Higher proportions of Kinesiology students also strongly agreed that the classes in their major were academically challenging. Diversity is an important component of the student experience and the workforce, and Kinesiology students were more satisfied with the diversity of faculty and staff than their peers at UNLV (53% vs. 44%).

2021-2022 Senior Exit Survey (Kinesiology n=166, 75% response rate)

Survey Item	UNLV Total (n=3,371)	Kinesiology (n=166)
Acquire knowledge and skills for career (strongly agree)	52% (n=1,665)	62% (n=96)
Classes in major academically challenging (strongly agree)	49% (n=1,589)	56% (n=86)
Faculty interest in students (strongly satisfied)	33% (n=1,050)	37% (n=56)
Diversity of faculty and staff (strongly satisfied)	44% (n=1,332)	53% (n=80)

Lightcast is a tool that scrapes social media accounts of institutional alumni to identify post-graduation outcomes. A search of graduate employment for students who completed the B.S. in Kinesiology since 2014 returned results for 414 alumni. The most common job titles are:

- Exercise Trainers and Instructors (25)
- Physical Therapist (24)
- Physical Therapy Assistant (15)
- Registered Nurse (12)
- General and Operations Manager (11)

- Social and Human Services Specialist (10)

The most common employers are:

- Clark County School District (10)
- ATI Physical Therapy (10)
- University of Nevada Las Vegas (8)
- Amazon (4)
- EOS Fitness (4)
- Proud Moments (4)
- Southern Nevada Health District (3)
- Cirque du Soleil (2)

14. Identify the skills students acquire through their program of study. How do these skills map onto workforce needs?

Undergraduate Program

Many students take KIN 475 and KIN 490 in their last year before graduation, which are packaged together for senior majors in Kinesiology as a Culminating Experience Seminar and Internship Fitness and Sport Management. Those courses allow students to complete a relevant internship experience and to enhance their professional development prior to entering the workforce. Some examples of businesses where those internship opportunities exist follow:

- Albion Sports Club Las Vegas
- Desert Orthopaedic Center
- Egoscue of Las Vegas
- Family & Sports Physical Therapy
- Impact Basketball
- Kelly Hawkins Physical Therapy
- Las Vegas Pain Relief Center
- Maximum Velocity Physical Therapy
- Motivated Kids Therapy
- MyBestMe Performance
- Off Ice Athletics
- Optimal Physical Therapy
- Synergy Physical Therapy
- The Meadows School
- Velasquez Pain Relief Center

Undergraduate students in Kinesiology learn a variety of skills that can be applied to a variety of careers in the field. Some of the most important skills that kinesiology students learn include:

- Anatomy and physiology: Kinesiology students learn about the structure and function of the human body. This knowledge is essential for understanding how the body moves and how it can be affected by exercise, injury, and disease.

- Biomechanics: Kinesiology students learn about the forces that act on the body during movement. This knowledge is essential for understanding how to improve athletic performance and prevent injuries.
- Exercise physiology: Kinesiology students learn about the physiological effects of exercise. This knowledge is essential for developing safe and effective exercise programs.
- Motor learning and control: Kinesiology students learn about how people learn and control movement. This knowledge is essential for helping people improve their movement skills.
- Health and wellness promotion: Kinesiology students learn about how to promote health and wellness through physical activity and lifestyle changes. This knowledge is essential for working with individuals and populations to improve their health.
- Research methods: Kinesiology students learn how to conduct research in the field of kinesiology. This knowledge is essential for contributing to the body of knowledge in the field and for developing new interventions and programs.

Graduate Programs

Graduate students in Kinesiology learn a variety of skills that are more specialized and in-depth than those learned in undergraduate programs. These skills are designed to prepare students for careers in research, education, and clinical practice.

Some of the most important skills that graduate students in Kinesiology learn include:

- Advanced research methods: Graduate students in Kinesiology learn how to conduct research at a high level. This includes learning how to design studies, collect data, analyze data, and write research papers.
- In-depth knowledge of a specific area of Kinesiology: Graduate students in Kinesiology typically specialize in a particular area of Kinesiology, such as exercise physiology, biomechanics, or motor learning. This specialization allows them to develop deep knowledge in a particular area and to conduct cutting-edge research.
- Teaching skills: Graduate students in Kinesiology often have the opportunity to teach undergraduate courses. This experience helps them to develop their teaching skills and to prepare them for a career in education.
- Clinical skills: Graduate students in Kinesiology may have the opportunity to gain clinical experience in settings such as hospitals, clinics, or sports medicine facilities. This experience helps them to develop their clinical skills and to prepare them for a career in clinical practice.

In addition to these core skills, graduate students in Kinesiology may also learn about specific topics related to their chosen career path. For example, students who want to become professors will learn about how to teach and how to conduct research. Students who want to become clinical specialists will learn about the diagnosis and treatment of specific conditions. Graduate students in Kinesiology work at Lake Las Vegas Sports Club, UNLV Athletics, and other settings while they develop and hone professional skills in the field.

Undergraduate and Graduate Programs

An emerging comparative advantage for Kinesiology students in the Las Vegas market is the burgeoning market for sports teams. A white paper released by UNLV Sports Innovation Center in the Lee Business School Center for Business and Economic Research reports a conservative estimate of 12% employment growth in performing arts, spectator sports, and related industries by 2030 (Woods, Lough, et al 2023).[2] In recent years, Las Vegas acquired a Stanley Cup champion hockey team, an NFL football team, a championship winning WNBA team, a contract for Formula 1 racing, and multiple minor league teams (hockey and baseball). Additionally, the Oakland As are in negotiations to move the team to Las Vegas. The city is also extremely likely to get an expansion NBA team.

Led by Dr. John Mercer, the program received funding for a new Sport Science project that should provide additional support for building sport science here at UNLV. A part of the budget will be a doctoral-level graduate assistant, master's-level graduate assistant, and Postdoc position for the newly minted Sport Performance and Entrepreneur Unit. The exact details of these positions are still in development but they will be used to further support sport science research and innovation. The main areas of focus of work of these graduate assistants will include working with UNLV athletics sport science, working with industry partners (e.g., research and design type of work), and supporting the development and operation of a sport science mobile facility.

Despite many promising opportunities, training students in Kinesiology for an uncertain career path is challenging because the field is constantly evolving and there is no guarantee of employment after graduation. Kinesiology is a broad field that encompasses a variety of areas, such as exercise science, physical therapy, and athletic training. This can make it difficult for students to choose a specific career path and to find a job that is a good fit for their skills and interests. In addition, the job market for Kinesiology graduates is competitive. There are many qualified students graduating from Kinesiology programs each year, and there are not always enough jobs available to accommodate all of them. This can make it difficult for students to find a job that pays well and offers good benefits.

Another challenge of training students in Kinesiology for an uncertain career path is that the field is constantly changing. New research is being conducted all the time, and new technologies are being developed. This can make it difficult for Kinesiology programs to keep up with the latest developments, and it can be difficult for students to know what skills they need to learn in order to be successful in the future. Despite these challenges, there are many opportunities for Kinesiology graduates. The field is growing rapidly, and there is a high demand for qualified professionals. Kinesiology graduates can work in a variety of settings, such as hospitals, fitness centers, schools, and sports teams. They can also work in research, education, and business.

[2] Woods, A., Lough, N., Miller, S., Mercer, J., Lee, J., Carner, C., and Allen, Z. (2023). *A Summary of the Sports Economy in Las Vegas* [White paper]. UNLV Sports Innovation Center Lee Business School Center for Business and Economic Research. https://cber.unlv.edu/wp-content/uploads/2023/05/Sports-Economy-White-Paper_April-2023-FINAL.pdf

15. What is the demand trajectory and employment opportunities in this area over the next 3–5 years? Identify the most important local employers for program graduates.

Undergraduate and Graduate Programs

The demand for university graduates in Kinesiology is expected to grow over the next 3–5 years. Employment opportunities with anticipate growth include:

- Exercise physiologists: Exercise physiologists develop and implement exercise programs for individuals and groups. They work in a variety of settings, including hospitals, clinics, fitness centers, and corporate wellness programs. The Bureau of Labor Statistics (BLS) projects employment of exercise physiologists to grow 10 percent from 2020 to 2030, faster than the average for all occupations.
- Physical therapists: Physical therapists help people who have injuries or disabilities to regain their physical function. They work in a variety of settings, including hospitals, clinics, and private practices. The BLS projects employment of physical therapists to grow 12 percent from 2020 to 2030, much faster than the average for all occupations.
- Recreational therapists: Recreational therapists help people with disabilities or chronic conditions participate in leisure and recreation activities. They work in a variety of settings, including hospitals, clinics, and community centers. The BLS projects employment of recreational therapists to grow 11 percent from 2020 to 2030, faster than the average for all occupations.

Overall, the demand for university graduates in Kinesiology is expected to be strong over the next few years. This is good news for students who are interested in pursuing a career in this field. However, it is important to note that competition for jobs in Kinesiology is likely to be stiff. Students who want to be successful in this field need to have a strong academic record, as well as experience in relevant internships and extracurricular activities. The UNLV Kinesiology program currently offers KIN 475 and KIN 490, which are packaged together for senior majors in Kinesiology as a Culminating Experience Seminar and Internship Fitness and Sport Management. Students spend time with a professor working on professional practice issues in class and they also spend time working with a preceptor in the community gaining valuable practice experience. Although this has been a valuable experience for many students, there are a very limited number of sites willing to offer a placement. So, the educational affiliation agreements that are required pose an obstacle, both in obtaining agreement signatures from site representatives and also maintaining the relationship and current paperwork as staff turns over.

In addition to the occupations listed above, there are a number of other career paths that are open to kinesiology graduates. For example, kinesiology graduates can work in:

- Public health: Kinesiology graduates can work in public health, developing and implementing programs to promote physical activity and healthy lifestyles.
- Education: Kinesiology graduates can teach Kinesiology at the high school and college levels.
- Research: Kinesiology graduates can conduct research on human movement and health.

- Business: Kinesiology graduates can work in the business world, developing and marketing products and services related to fitness and wellness.

The opportunities for Kinesiology graduates are diverse and exciting. With a strong academic background and relevant experience, Kinesiology graduates can find rewarding careers in a variety of fields.

In healthcare and public health, some of the important employers in Nevada include:

University Medical Center (UMC): A major public hospital in Las Vegas and the only Level I Trauma Center in Nevada, providing a wide range of medical services.
Sunrise Health System: Operates several hospitals and medical centers in the Las Vegas area, offering comprehensive healthcare services.
Valley Health System: A network of hospitals and healthcare facilities in Las Vegas, providing various medical services to the community.
Health Plan of Nevada: A leading health insurance provider in the state, offering a range of healthcare coverage options.

In the sports sector, while Nevada is known for its vibrant entertainment industry and major sporting events, specific employers in this sector might include:

Las Vegas Raiders: The NFL football team that relocated to Las Vegas, bringing significant attention to the city and creating opportunities in sports-related industries.
Las Vegas Golden Knights: The NHL hockey team that has garnered a strong following since its establishment in Las Vegas.
MGM Resorts International: While primarily a hospitality and entertainment company, MGM Resorts also owns and operates sports venues, hosting events like boxing matches and other sporting events.
Professional sports events and venues: Las Vegas frequently hosts major sporting events, such as boxing matches, MMA events, NASCAR races, and golf tournaments, which can create employment opportunities in event management, hospitality, and more.

16. Are there skills/areas of study that can be added or enhanced to meet evolving workforce needs?

Undergraduate and Graduate Programs

A potential area to add is Kinesiotherapy or Kinesiatrics, where the projected need in the USA is positive. Kinesiotherapists use rehabilitative exercise, reconditioning, and physical education to treat patients who have problems moving in any way. The career field emerged during World War II as a form of exercise therapy to treat service members' injuries so that they could return to active duty. Today, the physical reconditioning units where this therapy takes place are primarily in U.S. Department of Veterans Affairs (VA) facilities, where current and former military personnel may seek treatment.

Another untapped area is Chiropractic. Nevada's rapid population growth, aging population, and increasing awareness of the benefits of chiropractic care are all expected to contribute to the

growth of this profession. To prepare students for careers as chiropractic assistants, we can offer a comprehensive academic program with hands-on training, and help them develop their interpersonal and communication skills. As they progress, we could encourage students to pursue certification to demonstrate their qualifications.

One area of workforce needs that could be added is health coaching. The job outlook for health coaches is positive. The Bureau of Labor Statistics (BLS) projects employment of health coaches to grow 17 percent from 2020 to 2030, much faster than the average for all occupations. This growth is being driven by the increasing demand for health coaching services from individuals, businesses, and organizations.

Another area that could be enhanced is personal training. The projected need for personal trainers in the USA is strong. The BLS projects employment of fitness trainers and instructors, including personal trainers, to grow 19 percent from 2020 to 2030, much faster than the average for all occupations. This growth is being driven by the increasing demand for fitness and wellness services from individuals of all ages.

Similarly, the projected need for strength and conditioning specialists in the USA is strong. The BLS projects employment of fitness trainers and instructors, including strength and conditioning specialists, to grow 19 percent from 2020 to 2030, much faster than the average for all occupations. This growth is being driven by the increasing demand for fitness and wellness services from individuals of all ages, as well as the growing popularity of strength and conditioning programs for athletes.

To best prepare undergraduate students for careers as strength and conditioning specialists, coaches, and exercise physiologists, they should complete a rigorous academic program that includes a mix of foundational and specialized courses. Foundational courses should provide students with a strong understanding of the human body, how it moves, and how exercise affects it. Specialized courses should focus on the specific skills and knowledge needed for each profession. In addition to coursework, students should also gain hands-on experience through internships and volunteer work.

IX. Budget and Resources

17. What are the primary funding sources for this program?

Undergraduate and Graduate Programs

The programs in Kinesiology are supported by the budget allocated to the Department of Kinesiology and Nutrition Sciences. That budget consists of funding from State of Nevada, student course fees, and a self-supporting budget. In fiscal year 2022-2023, the State of Nevada provided approximately 27% of the budget at UNLV. This was down from 30% in fiscal year 2021-2022. The decrease in state funding was due to a number of factors, including the state's budget shortfall and the ongoing COVID-19 pandemic. Student course fees help to maintain or augment any materials, equipment, and supplies that are necessary to achieve

learning outcomes within each course. In addition, the department's faculty receives funding from a variety of federal, state, and private sources to support its research activities. Research grants and contracts support graduate students through assistantships and through covering costs of student thesis research activities.

18. Describe how revenue is allocated to support program activities.

Undergraduate and Graduate Programs

Instructional activities in the Kinesiology programs are funded through a combination of state appropriations and self-supporting funds from tuition and fees. Students pay course fees that are tied directly to the materials in the course that they take. When additional materials for that course are needed, instructors are able to make purchases using student course fees. The department has access to a special pool of funds for the hiring of part-time instructors. Those instructors are employed to cover additional sections of lectures and labs when there is a gap between student demand and instructional capacity. The Kinesiology program designated an undergraduate coordinator, Dr. Whaley and a graduate program coordinator, Dr. Navalta. Both directors earn a modest stipend to compensate them for the additional time and effort in providing leadership and student support, and administrative service duties for the programs.

19. Is the current revenue allocation sufficient to support the program? If additional resources are necessary, please describe the changes that are necessary.

Undergraduate and Graduate Programs

From a revenue standpoint, the program currently does not have sufficient resources to replace a recently retired Distinguished Professor who specialized in motor learning. The gap is currently filled by visiting assistant professors and part-time instructors, but the program will require funding for at least one permanent full-time instructional faculty member or tenure-track position. Augmenting faculty capacity would allow the program to offer a greater variety and quantity of courses in order to give students more choices and flexibility. Additional full-time positions would be instrumental in facilitating training in specialized areas and customizing the student advising experience.

Part-time faculty have an important role to play for the undergraduate program because they are often professionals who work within the field, and they can bring practical experience and professionalization into the classroom; however, use of part-time faculty must be balanced against the limitations of these positions. Part-time faculty are limited in their time and availability because teaching is not their full-time job. Furthermore, part-time faculty are often less engaged with the inner workings and goals of the program, and they may not have a research productivity that aligns with program goals. The job security and dedicated effort that flows from having program faculty that are staffed by designated full-time personnel generates more class options for students, higher research productivity, a more responsive faculty, and a more cohesive environment that promotes student success.,

This would help students to choose the right courses and to make the most of their time at our university. Additional faculty members would benefit our large undergraduate teaching activities in a number of ways. They would give students more choices, smaller class sizes, and more opportunities for research and advising. This would make our program more competitive and would better prepare our students for their careers after graduation. Ideally, we could replace some part-time instructors with dedicated full-time instructors who are lecturers or faculty-in-residence. Full-time lecturers are typically available to teach more courses than part-time instructors. This means that students have more options when it comes to choosing classes, and they are less likely to have to wait for a class to be offered. Full-time lecturers may be more available to meet with students outside of class hours. This allows them to provide more personalized advising to students, which helps them to choose the right courses or steps toward a career and to make the most of their time at university. Full-time lecturers have more job security than part-time instructors. This is because they are typically employed by the university on a permanent basis, rather than on a contract basis. Replacing part-time instructors with full-time lecturers would have a number of benefits for students and for the university as a whole. It could give students more choices, smaller class sizes, and more opportunities for research and advising. It would also improve the job security of lecturers and make the university more competitive.

20. Identify concerns in the following areas:

a. Library resources: In an era of artificial intelligence, social media, misinformation, and disinformation, our library will serve as an important ally for our academic programs to foster our efforts to produce evidence-based practitioners within sport- and health-related professions. The UNLV library system can better support our department by collaborating closely with faculty to curate specialized collections that align with the department's curriculum and research interests. We could benefit from tailored instruction sessions on advanced research techniques and information literacy skills, empowering students to navigate and critically evaluate scholarly resources effectively. The library can provide access to interlibrary loan services for materials beyond its own collection, ensuring faculty and students have access to a diverse range of resources. As it is already doing, the library can offer digital scholarship support, assist with open-access publishing options (and funding for article processing fees), and create collaborative spaces that foster interdisciplinary interactions and knowledge sharing within the academic department.
b. Equipment: There is a need to replace some of our outdated teaching/laboratory equipment with more modern items to give our students experience with what is currently used in the field. Previously, we had a functional hydrostatic weighing tank, which is no longer operational. We also had a Bod Pod that is no longer working and it would be very useful for our research and teaching to get access to a new one. Some of the exercise bicycles and treadmills need to be repaired or replaced.
c. Space: The issue of limited space for offices and research facilities presents a significant challenge. With a growing number of faculty members, researchers,

and graduate students, the demand for functional office spaces and well-equipped laboratories has outpaced the available resources. This shortage and inefficient layout of space can impede collaboration, hinder the development of innovative research projects, and limit opportunities for mentorship and engagement between faculty and students. As the department pursues academic excellence and embraces our R1 research-intensive university mission, addressing this spatial constraint becomes essential to fostering a vibrant and productive learning and research environment.

d. Other nonacademic sources: No concerns or problems at this time.

X. Summative Evaluation

21. Summarize the areas of excellence and/or strengths of this program.

Undergraduate Program

The B.S. in Kinesiology program has been very popular, so student numbers and credit hour production are strengths of the program. The program has an outstanding cadre of tenure-line professors who teach and research in areas of biomechanics, exercise physiology, motor learning/control and beyond. Tenured/tenure-track positions are supplemented by professors-in-residence and lecturers who prioritize teaching and learning within the program.

Degree programs are characterized by a rigorous curriculum, high expectations, clear and achievable standards, a vibrant community of motivated students, and abundant opportunities for hands-on and practical learning experiences possess a multifaceted strength that propels student success and prepares them for a dynamic world. The rigorous curriculum challenges students to delve deeply into their chosen fields, cultivating a mastery of foundational knowledge and critical thinking skills that form a solid intellectual foundation. With high expectations and clear standards, students are inspired to set ambitious goals, fostering a culture of excellence and self-improvement.

The presence of motivated peers creates an environment of healthy competition and collaborative learning, where students are continually pushed to achieve their best and learn from one another. The incorporation of hands-on and practical learning experiences offers a bridge between theory and application, allowing students to develop essential skills and gain real-world insights that translate seamlessly into their future careers. Collectively, these strengths empower students to emerge as well-rounded, confident, and capable individuals, fully equipped to excel in their professional endeavors and contribute meaningfully to their respective fields and communities.

Instruction-focused faculty members play a pivotal role in enriching both undergraduate and graduate programs by dedicating their expertise and passion to the art of teaching. For undergraduate students, these faculty members offer engaging and effective pedagogical

approaches that foster a deep understanding of foundational concepts, critical thinking, and practical skills. Their commitment to student learning goes beyond the classroom, providing mentorship, guidance, and support that contribute to academic success and personal growth.

For undergraduate students, research faculty bring real-world relevance to the classroom by integrating cutting-edge research findings into curriculum, fostering critical thinking, and inspiring a passion for inquiry. Their mentorship extends beyond lectures, guiding undergraduates in research projects, igniting curiosity, and cultivating the essential skills needed for success in a rapidly evolving world.

Graduate Programs

In graduate programs, instruction-focused faculty contribute to advanced training by imparting specialized knowledge and honing critical research and analytical abilities. They serve as mentors who empower graduate students to excel in their scholarly pursuits, aiding them in navigating the complexities of their fields and nurturing the development of original ideas. By fostering a culture of inclusive and active learning, instruction-focused faculty members elevate the educational experience, producing graduates who are well-prepared for the challenges of their chosen professions and who contribute positively to society.

Research faculty are indispensable assets to both undergraduate and graduate programs, enriching the academic environment through their expertise, mentorship, and commitment to advancing knowledge. Graduate students benefit immensely from research faculty's specialized knowledge and dedication. As mentors, they provide invaluable guidance, shaping the next generation of scholars and professionals, while involving graduate students in groundbreaking research endeavors that contribute to the expansion of human understanding. Research faculty serve as role models, instilling a culture of intellectual exploration and innovation, ultimately enhancing the quality and impact of both undergraduate and graduate programs.

22. Identify opportunities to improve this program.

Undergraduate Program

Aligning education with workforce readiness is essential to ensure that students have the skills and knowledge they need to succeed in the workforce. As the job market continues to evolve, it is important for educational institutions to keep pace and adapt their curriculum to meet the needs of employers. A well-aligned education system can help to reduce unemployment, increase worker productivity, and boost economic growth.

Maintaining rigor in undergraduate education is essential to ensure that students are prepared for the challenges of the workforce and graduate school. Grade inflation and the use of artificial intelligence (AI) may pose challenges to this goal. Grade inflation can make it difficult to assess student achievement and to ensure that students are meeting the standards of their courses. AI is increasingly being used in universities to support teaching and learning, but it is important to use AI in a way that does not compromise rigor. We can address this through standards that are communicated to students at the beginning of each course and applying standards

consistently. If we use AI tools, we must do this in a way that is aligned with their learning objectives. We may need faculty to use a variety of assessment methods such as case studies, projects, and presentations. We will need regular review of grading practices, making adjustments as needed to ensure that student grades are accurate and reflective of their learning.

With the above in mind, the program should streamline efforts to prepare undergraduates for careers in healthcare, sports, and further study. Many of the top STEM-oriented students will pursue applications to medical school, physical therapy, occupational therapy, and more. A large subset of students will pursue opportunities in sports settings, which may or may not require a graduate degree. A key consideration to improve the program is to provide opportunities for students to obtain micro-credentials and/or to prepare to pass exams for becoming exercise specialists, exercise physiologists, certified personal trainers, certified strength and conditioning specialists, and coaches.

Undergraduate and Graduate Programs

There are promising opportunities to enhance the Kinesiology academic programs that could involve a combination of strategic changes. The addition of expert faculty members from diverse backgrounds could bring fresh perspectives and deepen the breadth of knowledge available to students. Moreover, implementing relevant curricular changes ensures that the program aligns with the ever-evolving demands of the field and prepares students with applicable skills as they enter the workforce

Embracing an artful blend of in-person and online learning experiences will grant students greater flexibility and foster a dynamic and inclusive learning environment. The incorporation of new teaching methods and cutting-edge technology will engage students in innovative ways, promoting active learning, collaboration, and critical thinking. By embracing these opportunities, can elevate the academic program, delivering an education that not only meets but exceeds the expectations of students and equips them for success in an ever-changing landscape.

Kinesiology programs can better prepare students for the workforce in sports, healthcare, and public health roles by: Focusing on the intersection of science and practice; Emphasizing critical thinking and problem-solving skills; Promoting teamwork and collaboration; and Offering experiential learning opportunities.

- Kinesiology is the study of human movement, and a strong kinesiology program should provide students with a strong foundation in both the science of human movement and the practical application of that knowledge. This will prepare students to work in a variety of settings, from hospitals and clinics to gyms and sports teams.
- The healthcare, sports, and public health sectors are constantly evolving, and kinesiology graduates need to be able to think critically and solve problems in order to stay ahead of the curve. The Kinesiology programs should focus on developing these skills in students through coursework, research opportunities, and internships.
- The sports, healthcare, and public health sectors are all team-oriented, and Kinesiology graduates need to be able to collaborate effectively with others. The Kinesiology programs must promote teamwork and collaboration in students through group projects, case studies, and simulations.

- Experiential learning is essential for preparing students for the workforce. Kinesiology programs should offer students a variety of experiential learning opportunities, such as internships, clinical rotations, and research experiences. These opportunities give students the chance to apply their knowledge and skills in a real-world setting and may help students to determine professional pathways.

In addition to these specific strategies, Kinesiology programs can also better prepare students for the workforce by:

- Staying up-to-date on the latest trends in the healthcare, sports, and public health fields. Kinesiology is a rapidly evolving field, and it is important for programs to stay up-to-date on the latest trends. This can be done by hiring faculty who are experts in their field, providing students with access to current research, and offering continuing education opportunities for faculty and staff.
- Building relationships with employers. Kinesiology programs should build relationships with employers in the healthcare, sports, and public health fields. This can be done by hosting job fairs, inviting employers to speak to students, and facilitating opportunities for students to shadow professionals in these fields. These relationships will help students to network with potential employers and learn more about the job market.
- Providing support services for students. Kinesiology programs should provide support services for students, such as career counseling, academic advising, and financial aid assistance. These services will help students to succeed in their studies and prepare for the workforce.

By incorporating and prioritizing some of these components, the Kinesiology programs can better prepare students for the workforce in sports, healthcare, and public health roles.

23. Based on this analysis, what are the top three priorities/needs for this program in the future?

Undergraduate Program

Increase number of full-time instructional faculty who can teach upper-division courses.

Having a sufficient number of full-time instructional faculty members who can teach upper-division courses in a university context offers several significant benefits that contribute to the overall quality of education and student success. Here are some of the key advantages:

Expertise and Depth of Knowledge: Full-time instructional faculty members typically have specialized expertise in their respective fields. This depth of knowledge enhances the quality of instruction and allows them to deliver more in-depth and comprehensive content in upper-division courses. Students benefit from learning from experts who can provide a deeper understanding of complex topics.

Consistency and Continuity: Full-time faculty members provide a sense of continuity and stability to the curriculum. They are more likely to be involved in curriculum development, course design, and assessment strategies. This consistency ensures that the content and learning outcomes of upper-division courses align with the university's educational objectives over time.

Engagement and Mentorship: Full-time faculty members often have more time and availability to engage with students outside of the classroom. They can provide mentorship, guidance, and support for students' academic and career aspirations. This personalized attention fosters stronger student-faculty relationships and contributes to a more supportive learning environment.

Research and Scholarship Integration: Many full-time faculty members are engaged in research and scholarship activities within their fields. This allows them to incorporate the latest advancements, cutting-edge research, and real-world applications into their teaching. Students benefit from exposure to current trends and developments in the discipline.

Pedagogical Innovation: Full-time faculty members have the opportunity to experiment with innovative teaching methods, technologies, and assessment strategies in their upper-division courses. They can adapt their teaching approaches based on ongoing reflection and feedback, leading to continuous improvement in the learning experience.

Institutional Engagement: Full-time faculty members often play a more active role in the academic governance and institutional decision-making processes. They contribute to departmental and university-wide initiatives, curriculum development, and academic policy discussions, thereby positively impacting the overall educational experience.

Enhanced Student Performance: Research has shown that students who are taught by full-time faculty members tend to have higher academic performance, better retention rates, and increased likelihood of completing their degree programs. The focused attention and support provided by full-time faculty contribute to improved learning outcomes.

Faculty Development: Universities that prioritize hiring and retaining full-time instructional faculty members create an environment conducive to ongoing faculty development. Faculty members can engage in workshops, conferences, and professional development opportunities to enhance their teaching skills and stay updated with educational best practices.

Positive Campus Culture: The presence of committed and engaged full-time faculty members fosters a sense of community and shared purpose among both students and faculty. This positive campus culture contributes to a vibrant learning environment that encourages intellectual curiosity and collaboration.

Accreditation and Reputation: The presence of well-qualified full-time faculty who excel in teaching and scholarship can enhance the university's reputation and standing. It may positively impact accreditation reviews and external evaluations, contributing to the overall credibility of the institution.

So, having more full-time instructional faculty who can teach upper-division courses brings numerous benefits to the program, including enhanced expertise, student engagement, pedagogical innovation, and overall academic quality. These faculty members contribute significantly to the institution's educational mission and the success of its students.

Update Curricular Offerings

Updating and developing the Kinesiology curriculum is of paramount importance, including:

Reflecting Current Research and Practices: Kinesiology and exercise sciences are fields that continually evolve with new research findings, technological advancements, and changes in best practices. Updating the curriculum ensures that students are exposed to the latest knowledge and methods, preparing them to become competent professionals who can contribute effectively to their field upon graduation.

Meeting Industry Demands: The health and wellness industry is dynamic and responsive to emerging trends and societal needs. By regularly updating the curriculum, state-supported universities can ensure that graduates possess the skills and knowledge required by the industry. This helps graduates secure relevant job opportunities and makes them more competitive in the job market.

Adapting to Technological Advances: Technological advancements play a significant role in kinesiology and exercise sciences, from wearable devices to virtual reality training programs. An updated curriculum allows students to learn how to leverage these technologies effectively, making them better prepared to incorporate technological tools into their professional practice.

Enhancing Student Engagement and Motivation: An updated curriculum can incorporate innovative teaching methods, case studies, and real-world applications that capture students' attention and enthusiasm. This approach can lead to higher levels of engagement, motivation, and interest in the subject matter, resulting in improved learning outcomes.

Cultural and Societal Relevance: Societal perceptions of health, fitness, and well-being evolve over time. An updated curriculum can address current cultural and societal issues related to physical activity, nutrition, and overall wellness. This ensures that graduates are not only knowledgeable but also culturally sensitive and able to promote health in diverse populations.

Meeting Accreditation Standards: State-supported universities often need to adhere to accreditation standards set by professional organizations and accrediting bodies. Regularly updating the curriculum helps ensure that the program meets these standards and maintains its accreditation status, which is crucial for program credibility and student outcomes.

Interdisciplinary Collaboration: The fields of kinesiology and exercise sciences intersect with various other disciplines, such as psychology, biology, nutrition, and public health. An updated curriculum can facilitate interdisciplinary collaboration and provide students with a well-rounded education that prepares them to work collaboratively in multidisciplinary settings.

Faculty Development: An updated curriculum encourages faculty members to stay current with their subject matter. This can lead to professional growth, increased engagement in research and scholarly activities, and improved teaching practices—all of which ultimately benefit students.

Promoting Critical Thinking and Problem-Solving: An updated curriculum can include challenging and relevant case studies, research projects, and practical experiences that promote critical thinking, analytical skills, and problem-solving abilities. These skills are highly transferable and prepare students to address complex issues in their careers.

Long-Term Program Success: An updated curriculum contributes to the long-term success and sustainability of the kinesiology or exercise sciences program. As the program remains relevant and responsive to changing needs, it attracts motivated students, maintains healthy enrollment levels, and contributes positively to the university's reputation.

Updating and developing the Kinesiology curriculum is essential for providing students with a high-quality education that aligns with industry trends, technological advancements, and societal needs. By doing so, our department can ensure that graduates are well-prepared to make meaningful contributions to the field and society at large.

Graduate Programs

Procure more extramural funding to support strong research mentorship between faculty and graduate students.

Extramural funding plays a crucial role in supporting strong research mentorship between faculty and graduate students at UNLV and its peer institutions:

Resource Allocation: Extramural funding provides the necessary financial resources to support research projects, covering expenses such as equipment, supplies, travel, and personnel. With adequate resources, faculty members can engage graduate students in more comprehensive and impactful research activities, enhancing the overall mentorship experience.

Enhanced Research Opportunities: Extramural funding enables faculty to initiate and sustain cutting-edge research projects that offer unique and valuable learning experiences for graduate students. Engaging in innovative and well-funded research enhances students' exposure to advanced techniques, methodologies, and real-world applications.

Student Involvement: Extramural funding allows for increased graduate student involvement in research projects. Students can work closely with faculty mentors, participate in experimental design, data collection, analysis, and interpretation, thereby gaining hands-on experience and contributing meaningfully to the research process.

Mentorship Quality: Adequate extramural funding enables faculty mentors to dedicate more time and attention to graduate students. It allows for more personalized mentorship, guidance, and feedback, fostering a deeper and more impactful mentor-mentee relationship. Faculty members can provide one-on-one support, professional development, and career advice.

Professional Development: Extramural funding supports graduate students in presenting their research at conferences, workshops, and seminars. This exposure enhances their communication and networking skills, helps them establish connections within their field, and prepares them for future career opportunities.

Publication and Collaboration: Well-funded research projects often lead to high-quality publications in reputable journals and collaborations with other institutions or experts in the field. Graduate students benefit from these collaborative opportunities, gaining exposure to diverse perspectives and expanding their professional network.

Research Infrastructure: Extramural funding can be used to establish or enhance research infrastructure, such as specialized laboratories or research centers. This provides graduate students with access to state-of-the-art facilities and resources that facilitate their research endeavors.

Long-Term Research Sustainability: Sustainable extramural funding allows for the continuation of long-term research projects. This consistency ensures that graduate students have the opportunity to engage in research throughout their academic journey, fostering a sense of continuity and a deeper understanding of complex research processes.

Competitive Advantage: Large state universities often compete for top-tier graduate students. Having faculty members with strong extramural funding and a track record of successful research mentorship enhances the university's reputation and attractiveness to prospective students seeking impactful research opportunities.

Knowledge Transfer: Extramurally funded research projects often have practical applications and potential for knowledge transfer to industry or the community. Graduate students involved in such projects gain exposure to real-world problem-solving, contributing to their professional development and increasing their employability.

Thus, extramural funding is integral to supporting strong research mentorship between faculty and graduate students at UNLV. It not only provides the necessary resources for conducting high-quality research but also enhances the overall mentorship experience, promotes student engagement, and prepares graduates for successful careers in academia, industry, or other professional fields.

Appendix A: Selected Recent Faculty Publications

Kinesiology program faculty authors appear in bold text. Student first authors are underlined.

- Bodell, N.G., **Navalta, J.W.,** Kawi, J. and Bungum, T., 2023. The Implementation and Testing of a Reliable and Valid Oral Fat Tolerance Test for Research and Clinical Purposes. *Integrative Journal of Medical Sciences*, *10*, pp.1-6.
- Borgia, B., Dufek, J.S., **Radzak, K.N.** and **Freedman Silvernail, J.,** 2022. The effect of exercise modality on age-related changes observed during running. *European Review of Aging and Physical Activity*, *19*(1), pp.1-8.
- Borgia, B., Dufek, J.S., **Silvernail, J.F.** and **Radzak, K.N.,** 2022. The effect of fatigue on running mechanics in older and younger runners. *Gait & posture*, *97*, pp.86-93.
- Carrier, B., Helm, M.M., Cruz, K., Barrios, B. and **Navalta, J.W.,** 2023. Validation of Aerobic Capacity (VO2max) and Lactate Threshold in Wearable Technology for Athletic Populations. *Technologies*, *11*(3), p.71.
- Cochrane, R.D., **Navalta, J.W.** and Weisman, A.E., 2023. The Hero's Journey as a Novel, Narrative, and Improvisational Group Intervention on Quality of Life for People with Parkinson's Disease. *Heroism Science*, *8*(1), p.1.
- Falk, G.E., Mailey, E.L., Okut, H., **Rosenkranz, S.K., Rosenkranz, R.R.,** Montney, J.L. and Ablah, E., 2022. Effects of sedentary behavior interventions on mental well-being and work performance while working from home during the COVID-19 pandemic: A pilot randomized controlled trial. *International Journal of Environmental Research and Public Health*, *19*(11), p.6401.
- Gardner, C., **Navalta, J.W.,** Carrier, B., Aguilar, C. and Perdomo Rodriguez, J., 2023. Training Impulse and Its Impact on Load Management in Collegiate and Professional Soccer Players. *Technologies*, *11*(3), p.79.
- Garver, M.J., **Navalta, J.W.,** Heijnen, M.J., Davis, D.W., Reece, J.D., Stone, W.J., Siegel, S.R. and Lyons, T.S., 2023. IJES Self-Study on Participants' Sex in Exercise Science: Sex-Data Gap and Corresponding Author Survey. *International Journal of Exercise Science*, *16*(6), p.364.
- Goodman, B.D., Streetman, A.E., Mailey, E.L., **Rosenkranz, R.R.** and Heinrich, K.M., 2023. Differences in physical activity behaviors between university women from metropolitan, micropolitan, and rural areas. *Journal of American College Health*, pp.1-6.
- Hanes, C.E., **Schilling, B.K.,** Mulvenon, S.W. and **Radzak, K.N.,** 2022. Effects of Fatigue on Functional Movement Efficiency in Physically Active Adults. *The Journal of Strength & Conditioning Research*.
- Heinrich, K.M., Pentz, J.L., Goodman, B.D., Casey, K. and **Rosenkranz, S.K.,** 2022. Tap to togetherness: A program for parents and children together. *Journal of Dance Education*, *22*(3), pp.199-205.
- Junior, R.C.V., Machado, A.S., Faria, S.I.G., Ávila, E.T.P., Ghayomzadeh, M., Seyedalinaghi, S., **Navalta, J.W.** and Voltarelli, F.A., 2023. Physical and functional evaluations in oncological patients elective to medium and large operations. *Supportive Care in Cancer*, *31*(7), pp.1-11.
- Kellstedt, D.K., Schenkelberg, M.A., Rosen, M.S., Von Seggern, M.J., Idoate, R., Welk, G.J., **Rosenkranz, R.R.** and Dzewaltowski, D.A., 2022. COVID-19 pandemic and changes in children's physical activity in a rural US community: a mixed methods study. *BMJ open*, *12*(10), p.e062987.
- Kelly, D.K., Wiegand, K. and **Silvernail, J.F.,** 2022. Dynamic stability in runners with and without plantar fasciitis. *Gait & Posture*, *96*, pp.301-305.
- Khalafi, M., Akbari, A., Symonds, M.E., Pourvaghar, M.J., **Rosenkranz, S.K.** and Tabari, E., 2023. Influence of different modes of exercise training on inflammatory markers in older adults with and without chronic diseases: A systematic review and meta-analysis. *Cytokine*, *169*, p.156303.
- Khalafi, M., Aria, B., Symonds, M.E. and **Rosenkranz, S.K.,** 2023. The effects of resistance training on myostatin and follistatin in adults: A systematic review and meta-analysis. *Physiology & Behavior*, p.114272.
- Khalafi, M., Habibi Maleki, A., Sakhaei, M.H., **Rosenkranz, S.K.,** Pourvaghar, M.J., Ehsanifar, M., Bayat, H., Korivi, M. and Liu, Y., 2023. The effects of exercise training on body composition in postmenopausal women: a systematic review and meta-analysis. *Frontiers in Endocrinology*, *14*, p.1183765.
- Khalafi, M., Mojtahedi, S., Ostovar, A., **Rosenkranz, S.K.** and Korivi, M., 2022. High-intensity interval exercise versus moderate-intensity continuous exercise on postprandial glucose and insulin responses: A systematic review and meta-analysis. *Obesity Reviews*, *23*(8), p.e13459.
- Khalafi, M., Ravasi, A.A., Malandish, A. and **Rosenkranz, S.K.,** 2022. The impact of high-intensity interval training on postprandial glucose and insulin: A systematic review and meta-analysis. *Diabetes Research and Clinical Practice*, *186*, p.109815.

- Khalafi, M., Sakhaei, M.H., Habibi Maleki, A., **Rosenkranz, S.K.,** Pourvaghar, M.J., Fang, Y. and Korivi, M., 2023. Influence of exercise type and duration on cardiorespiratory fitness and muscular strength in post-menopausal women: a systematic review and meta-analysis. *Frontiers in Cardiovascular Medicine*, *10*, p.1190187.
- Khalafi, M., Sakhaei, M.H., Kazeminasab, F., **Rosenkranz, S.K.** and Symonds, M.E., Exercise training, dietary intervention, or combined interventions and their effects on lipid profiles in adults with overweight and obesity: a systematic review and meta-analysis of randomized clinical trials. *Nutrition, Metabolism and Cardiovascular Diseases*.
- Khalafi, M., Sakhaei, M.H., **Rosenkranz, S.K.** and Symonds, M.E., 2022. Impact of concurrent training versus aerobic or resistance training on cardiorespiratory fitness and muscular strength in middle-aged to older adults: A systematic review and meta-analysis. *Physiology & Behavior*, *254*, p.113888.
- Khalafi, M., Symonds, M.E., Ghasemi, F., **Rosenkranz, S.K.,** Rohani, H. and Sakhaei, M.H., 2023. The effects of exercise training on postprandial glycemia and insulinemia in adults with overweight or obesity and with cardiometabolic disorders: a systematic review and meta-analysis. *Diabetes Research and Clinical Practice*, p.110741.
- Lim, B., Swafford, A.P., Conroy, K.E., & **Mercer, J.A.** (2022). Shoulder muscle activity while swimming in different wetsuits and across different paces. *International Journal of Exercise Science*, 16(1), 172-181.
- Mailey, E.L., **Rosenkranz, R., Rosenkranz, S.K.,** Ablah, E., Talley, M., Biggins, A., Towsley, A. and Honn, A., 2022. Reducing Occupational Sitting While Working From Home: Individual and Combined Effects of a Height-Adjustable Desk and an Online Behavioral Intervention. *Journal of Occupational and Environmental Medicine*, *64*(2), pp.91-98.
- Malek, E.M., **Navalta, J.W., McGinnis, G.R**., (2023). Time of day and chronotype-dependent synchrony effects exercise-induced reduction in migraine load: A pilot cross-over randomized trial. *Int J Environ Res Public Health*. 20(3):2083.
- Masumoto, K. and **Mercer, J.A.,** 2023. The combined influence of body weight support and running direction on self-selected movement patterns. *Human movement science*, *88*, p.103065.
- Masumoto, K. and **Mercer, J.A.,** 2023. Influence of speed on running strategies during forward and backward running with body weight support. *Journal of Sports Medicine and Physical Fitness*, *63*(2), pp.241-249.
- **McGinnis, G.R.**, Thompson, S.T., **Aguilar, C.A.**, Dial, M.B., **Tandy, R.D., Radzak, K.N.** (2022). Chronotype and social jetlag influence performance and injury during reserve officersâ€™ training corps physical training. *Int J Environ Res Public Health.* 19(20):13644.
- McLoughlin, G.M., Sweeney, R., Liechty, L., Lee, J.A., **Rosenkranz, R.R.** and Welk, G.J., 2022. Evaluation of a Large-Scale School Wellness Intervention Through the Consolidated Framework for Implementation Research (CFIR): Implications for Dissemination and Sustainability. *Frontiers in Health Services*, *2*.
- **Navalta, J.W.** and Bunn, J.A., 2023. Continued opportunities in wearable technologies and physiological assessment. *Frontiers in Digital Health*, *5*, p.1166088.
- **Navalta, J.W.,** Beck, V.D., Diaz, T.M. and Ollano, V.E., 2022. Effects of nutritional and hydration strategies during ultramarathon events between finishers and non-finishers: A systematic review protocol. *Plos one*, *17*(8), p.e0272668.
- **Navalta, J.W.,** Davis, D.W., Malek, E.M., Carrier, B., Bodell, N.G., Manning, J.W., Cowley, J., Funk, M., Lawrence, M.M. and DeBeliso, M., 2023. Heart rate processing algorithms and exercise duration on reliability and validity decisions in biceps-worn Polar Verity Sense and OH1 wearables. *Scientific Reports*, *13*(1), p.11736.
- **Navalta, J.W.,** Salatto, R., Hoover, D.L. and Stevenson, A., 2023. Introducing the “Topics Brief”: Bridging the Gap Between University and Non-Academics in a Potentially More Meaningful Way. *Topics in Exercise Science and Kinesiology*, *4*(1), p.5.
- Plesek, J., Hamill, J., Blaschova, D., **Freedman–Silvernail, J.** and Jandacka, D., 2023. Acute effects of footwear on running impact loading in the preschool years. *Sports Biomechanics*, *22*(3), pp.442-458.
- Plesek, J., Hamill, J., **Freedman Silvernail, J.,** Skypala, J. and Jandacka, D., 2022. Age differences in running biomechanics during footstrike between preschool children and adults. *Journal of Sports Sciences*, *40*(21), pp.2401-2411.
- Rider, J.V., Longhurst, J.K., Lekhak, N., **Navalta, J.W.,** Young, D.L. and Landers, M.R., 2023. Psychological Factors Associated With Fear of Falling Avoidance Behavior in Parkinson’s Disease: The Role of Depression, Anxiety, and Catastrophizing. *Journal of geriatric psychiatry and neurology*, *36*(3), pp.215-224.

- Rider, J.V., Longhurst, J.K., **Navalta, J.W.,** Young, D.L. and Landers, M.R., 2023. Fear of falling avoidance behavior in Parkinson's disease: most frequently avoided activities. *OTJR: Occupational Therapy Journal of Research*, *43*(2), pp.228-236.
- **Rosenkranz, R.R.,** Cull, B.J., **Rosenkranz, S.K.** and Dzewaltowski, D.A., 2022. Home-Based Health Coaching for Girls With Overweight and Obesity: A Randomized Clinical Trial. *JAMA Network Open*, *5*(6), pp.e2216720-e2216720.
- **Rosenkranz RR,** Dixon P, Dzewaltowski DA, McLoughlin G, Lee J, Chen S, Vazou S, Lanningham-Foster L, Gentile DA, & Welk G (2023). A cluster-randomized trial assessing comparative effectiveness of two SWITCH implementation processes for school wellness programming. *Journal of Sport & Health Science,* 12(1), 87–96.
- Schenkelberg, M.A., Von Seggern, M.J., Rosen, M.S., Schlechter, C.R., **Rosenkranz, R.R.** and Dzewaltowski, D.A., 2023. A Protocol for a Local Community Monitoring and Feedback System for Physical Activity in Organized Group Settings for Children. *Journal of Physical Activity and Health*, *1*(aop), pp.1-9.
- Singh, H., Shih, H.T., Kal, E., Bennett, T. and **Wulf, G.,** 2022. A distal external focus of attention facilitates compensatory coordination of body parts. *Journal of Sports Sciences*, *40*(20), pp.2282-2291.
- Singh, H. and **Wulf, G.,** 2022. Mind over body: Creating an external focus for sport skills. *European Journal of Sport Science*, *22*(4), pp.610-616.
- Tom, J.C., **Schilling, B.K.,** Poston, B., Turner, C.L. and **Radzak, K.N.,** 2022. United States university-based officer training and its influence on physical assessment test performance. *BMJ Mil Health*, *168*(3), pp.206-211.
- Urbaczka, J., **Silvernail, J.F.** and Jandacka, D., 2022. The effect of fatigue on the ankle and knee kinematics and kinetics in moderately and highly trained healthy non-rearfoot runners. *Sports Biomechanics*, pp.1-15.
- Urbaczka, J., **Silvernail, J.F.** and Jandacka, D., 2022. Effect of training volume on footstrike patterns over an exhaustive run. *Gait & Posture*, *91*, pp.240-246.
- Waldron, JL, McKenney, MA, **Samuel, MN, Girouard, TJ,** Turner, CL, & **Radzak, K N.** (2020). The use of postural restoration for treatment of chronic rotator cuff pathology: a case report. *International Journal of Sports Physical Therapy*, 15(5): 832-839.
- Wiegand, K., **Tandy, R.** and **Silvernail, J.F.,** 2022. Plantar fasciitis injury status influences foot mechanics during running. *Clinical Biomechanics*, *97*, p.105712.
- Wiegand, K., **Tandy, R.** and **Silvernail, J.F.,** 2023. Two-year injury incidence and movement characteristics among Division-I cross-country athletes. *International journal of exercise science*, *16*(1), p.159.
- Zaragoza E, Lough N, **Samuel M, Girouard T.** Athletic Training Preceptors' Levels of Cultural Competence: A Cross- Sectional Study. *Athl Train Educ J.* 2022;17(3):195-200.

Appendix B: Selected Recent Faculty Extramural Funding

- McGinnis, G.R. (PI): Effects of time-of-day dependent exercise training on social jetlag induced susceptibility to cardiometabolic disease. NIGMS R16 ($750,000).
- McGinnis, G.R. (PI): Time of day dependent regulation of exercise-induced preconditioning of the heart against ischemia-reperfusion injury. NIGMS via Nevada IDeA Network of Biomedical Research Excellence. ($225,000)
- McGinnis, G.R. (PI): Circadian regulation of inflammatory response to Particulate Matter (PM) exposure. Role: PI. NIGMS via IDeA Network of Biomedical Research Excellence ($30,000).
- McGinnis, G.R. (PI): Diurnal regulation of exercise-induced interleukin-6 production and secretion. NIGMS via Nevada IDeA Network of Biomedical Research Excellence, NIH-NIGMS. ($14,950).
- Navalta, J.W. (PI) Effect of Exercise in Natural Environments and Time of Day on Migraine Pain. Centers of Biomedical Research Excellence (COBRE) National Institutes of Health Pilot Grant. ($25,000).
- Poston B. (PI): Long-Term Transcranial Direct Current Stimulation in Parkinson's Disease NIH/NINDS (R15) – ($420,881).
- Rosenkranz R.R. (site PI) Dissemination of an Adolescent Obesity Prevention Intervention to Louisiana Schools. National Institutes of Health Academic Research Enhancement Award (AREA) for Undergraduate-Focused Institutions (R15) – (subaward $19,348).
- Rosenkranz S.K. (PI) UNR-Extension/UNLV to address critical issues facing Clark County through collaboration and engagement ($259,952)