AC 2024 – 2025 Assessment

Program -- Health and Exercise Science (377)

Division: Gallaspy College of Education and Human Development

Department: Health and Human Performance

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Northwestern State Mission. Northwestern State University is a responsive, student-oriented institution committed to acquiring, creating, and disseminating knowledge through innovative teaching, research, and service. With its certificate, undergraduate, and graduate programs, Northwestern State University prepares its increasingly diverse student population to contribute to an inclusive global community with a steadfast dedication to improving our region, state, and nation.

College Mission. The Gallaspy Family College of Education and Human Development is committed to working collaboratively to acquire, create, and disseminate knowledge to Northwestern students through transformational, high-impact experiential learning practices, research, and service. Through the School of Education and Departments of Health and Human Performance, Military Science, Psychology, and Social Work, the College produces knowledgeable, inspired, and innovative graduates ready for lifelong learning who contribute to the communities in which they reside and professions they serve. Additionally, the GCEHD is dedicated to the communities served by the Marie Shaw Dunn Child Development Center, NSU Elementary Laboratory School, NSU Middle Laboratory School, and the NSU Child and Family Network to assist children and their families related to learning and development.

Department Mission. The Department of Health & Human Performance's academic programs provide a foundation for our students to leave Northwestern State University as innovative, contemporary leaders prepared for a variety of career opportunities in health, kinesiology, and sport. Our faculty provides a collaborative, supportive learning environment in which students discover, explore, and practice the knowledge, movement, and values that will help ensure a healthy, productive lifestyle and successful career.

Program Mission Statement: Through the completion of program requirements for Health and Exercise Science, students will gain knowledge and skills for employment opportunities within the health, kinesiology, and exercise science industries. Students will acquire, create, and disseminate knowledge through transformational, high-impact experiential learning practices, critical thinking, research, reflective analysis, communication, and evaluation. The Bachelor of Science Degree in Health and Exercise Science challenges students to develop plausible solutions to the diagnostic and prescriptive response to exercise needs in health scenarios. Through these learning experiences, Health and Exercise Science students are prepared for life and career

success in this every growing field.

Methodology: The assessment process for the Health and Exercise Science program is as follows:

(1) Data from assessment tools are collected and returned to the Department Head.
(2) The Department Head will analyze the data to determine whether students have met measurable outcomes.
(3) Results from the assessment will be discussed with the program faculty.
(4) Individual meetings will be held with faculty teaching major undergraduate courses if required (show cause).
(5) The Department Head, in consultation with the HHP Advisory Committee, will propose changes to measurable outcomes, assessment tools for the next assessment period and, where needed, curricula and program changes.

Student Learning Outcomes:

SLO 1: The student will demonstrate a basic knowledge of exercise science.

Course Map: Tied to course syllabus objectives.

- HP 2000: Introduction to Exercise Science
- HP 2270: Physical Fitness HED 3000: Community Health
- HP 3550: Applied Kinesiology
- HP 3560: Exercise Physiology

Measure 1.1. (Direct – Knowledge)

On an annual basis, students enrolled in HP 2000, HP 2270, HED 3000, HP 3550 and HP 3560 are administered course exams designed to evaluate the student knowledge and understanding of the foundational concepts, theories, strategies, and challenges of the health and fitness industry. 75% of enrolled students will be able to describe a basic knowledge of the health and fitness industry standards by scoring 70% or higher on the exams.

Finding. Target was met.

Analysis.

In AC 2023-2024, the target was met. 91.76% of students who attempted their final exams met or exceeded the target score of at least 70% on their final exams. Based on information gathered from analysis of the AC 2023-2024 data, faculty implemented the following changes in AC 2024-2025 to drive the cycle of improvement. In AC 2024-2025, faculty will teach each course in lab-like conditions with improved, updated equipment and real-world activities. Students evaluated case studies and developed protocols for activity-based prescription treatments to drive the cycle of improvement. These changes resulted in students meeting the

target for AC 2024-2025. While the department did accomplish this goal by modifying content in classes like HP 2000 and HP 2630 during AC 2024-2025, the students who took HP 3550, HP 3560, and HP 4170 during AC 2024-2025 had already taken these prerequisite courses and consequently did not benefit from the improved curricula in those prerequisite courses. Therefore, it is expected that students registered for HP 3550, HP 3560, and HP 4170 in AC 2025-2026 will demonstrate higher-level performance in exercise science-focused coursework due to improvements in prerequisite courses.

In AC 2024-2025, 77.47% of students who attempted their final exams met or exceeded the target score of at least 70% on their final exams. Although performance does meet the predesignated standard of success, this year's scores represent a decrease in performance compared to AC 2023-2024, in which 91.76% of students in the Health and Exercise Science program met the target score. Several factors likely contributed to lower performance on final exams in these particular courses, including the hiring of a new professor and physical therapist as a faculty member, which has resulted in a more rigorous curriculum in higher-level exercise science courses and, therefore, more challenging final exams. While performance on final exams has decreased, the quality of both the course content and assessments has improved, and students' final exam grades, as well as their overall final grades in the course, partially reflect these changes. In all classes listed, students continue to successfully demonstrate critical thinking and problem-solving skills through a variety of case studies, as well as scenario-driven exercises (labs), in which they were required to analyze and develop a response to a health and exercise related situation. In these responses, students demonstrated proper response and actionable recommendations based on the information presented.

Decision.

In AC 2024-2025, the target was met.

Based on information gathered from analysis of the AC 2024-2025 data, faculty will implement the following changes in AC 2025-2026 to drive the cycle of improvement. In AC 2025-2026, the department will see further improvements to the laboratory spaces in the Health and Human Performance building, including large pieces utilized in metabolic and fitness testing. Near-future purchases will see the development of the motor learning lab, which will house equipment needed for motor and gait analysis, such as a multi-camera video recording system, movement analysis software, force plates, and more. These continued upgrades to learning facilities will further enhance our exercise science courses, and in turn, performance on final exams in upper-level HES courses. Additionally, faculty will continue to incorporate more lab-like conditions with improved, updated equipment and real-world activities. Students will evaluate case studies in more courses and develop protocols for activity-based prescription treatment. Additionally, lower-level courses will continue to incorporate more basic exercise science content to better prepare students for upper-level coursework, including the

further modification of the curriculum of HP 2630 and HP 2000.

Measure 1.2. (Direct – Skill / Ability)

Students will demonstrate their critical thinking and problem-solving skills through a variety of case studies, as well as scenario-driven exercises in which they are required to analyze and develop a response to a health and exercise related situation. In these responses, they must demonstrate proper response and actionable recommendations based on the information presented. 75% of the students will score 70% or higher on these exercises.

Finding. Target was met.

Analysis.

In AC 2023-2024, the target was met. Based on information gathered from the data, faculty made the following changes in AC 2024-2025 to drive the cycle of improvement. In AC 2024-2025, the Health and Exercise Science program faculty collaborated closely to ensure that all laboratory and practical experiences offered to our students were complementary, diverse, practical, and provided realistic and immediate feedback, particularly when it comes to health and fitness assessment. Syllabi were reviewed and aligned with national standards and workforce needs. To determine student performance on assignments focused on case study, scenario-driven, and/or critical thinking exercises, data were collected from course sections that utilized these types of assignments, based on instructor feedback.

In AC 2024-2025, two sections of HP 2270 (n = 14), three sections of HED 3000 (n = 82), and two sections of HP 3550 (n = 47) utilized assignments of the nature required for Measure 1.2. Of note, HP 2000, HP 3560, and HED 3000 all utilized multiple case study, scenario-driven, and/or critical thinking assignments and activities throughout the semester. Therefore, for Measure 1.2, cumulative assignment scores were utilized when appropriate to account for each student's overall semester performance.

A total of 142 students in these course sections were given the opportunity to complete these types of assignments, and of them, 83.2% (n = 119) completed these assignments with a score of 70% or higher. This reflects similar performance to AC 2023-2024, in which 82.13% of students met the threshold for Measure 1.2. Improvements to laboratory spaces and the inclusion of faculty who are content-specific specialists in exercise science have provided students with more opportunities to access diverse and creative hands-on laboratory experiences. Because our program prepares students for pre-professional programs (i.e., physical therapy school, occupational therapy school, athletic training masters programs, etc.), critical thinking and scenario-driven assignments and activities are particularly important and practical.

Decision. In AC 2024-2025, the target was met.

Based on an analysis of the AC 2024-2025 data, faculty will implement the following in AC 2025-2026. The Health and Exercise Science program faculty will collaborate closely to ensure that all laboratory and practical experiences offered to our students are complementary, diverse, practical, and provide realistic and immediate feedback, particularly when it comes to health and fitness assessment. Additionally, 1000- and 2000-level courses will incorporate more case study and laboratory-based activities to better prepare students for upper-level classes. Faculty will work together to restructure the student learning outcomes to align with the updated Health and Exercise Science curriculum and national standards, as well as determine precise measures to determine student achievement.

SLO 2: The student will demonstrate the ability to develop an exercise prescription plan, which encompasses the initial prescription, maintenance for such prescription and subsequent re-evaluation strategies for apparently healthy populations.

Course Map: Tied to course syllabus below.

HP 4170: Testing, Evaluation, and Prescription of Exercise in Health and Human Performance

Measure: 2.1. **(Direct – Skill / Ability)**

Students will prepare a prescription plan for a specified health need/condition. In these responses, the student will demonstrate proper progression toward the expected outcome and actionable recommendations based on the scenario(s). 75% of the students will score 80% or higher on these exercises.

Finding. Target was met.

Analysis.

In AC 2023-2024, the target was met. Based on an analysis of the data, the following changes were made in AC 2024-2025 to continue the cycle of improvement: exercise testing and prescription foundations were introduced earlier in the curriculum in relevant courses such as HP 2630, HP 3550, and HP 3560, which enabled students in HP 4170 to focus on more advanced equipment, settings, and applications of their knowledge to real-world scenarios. Additionally, Data was collected from the two sections of HP 4170 taught during AC 2024-2025. Of the students enrolled in this course (n = 35), 84% of them (n = 21) received a grade of at least 80% on their assignments requiring them to write customized exercise prescription plans. This exceeds the preset threshold of 75% of students scoring 80% or higher on assignments of this nature and also reflects a similar performance to AC 2023-2024 (88.24%). HP 4170 is primarily a laboratory-based course and incorporates many opportunities for students to conduct

fitness testing, explore various contraindications, warning signs and modifications, and create exercise prescription recommendations based on a client's specific needs. During AC 2024-2025, a combination of improvements to the Exercise Physiology Laboratory space and curriculum of HP 2630 and HP 3550 have led to improvements in the student experience and their performance in these assignments.

Decision.

In AC 2024-2025, the target was met.

Based on an analysis of the data for AC 2024-2025, the following changes will be made in AC 2025-2026 to continue the cycle of improvement: In AC 2025-2026, basic exercise-science concepts will continue to be incorporated into introductory-level coursework, especially in HP 2000 and HP 2630. Particular emphasis will be placed on the components of fitness and motor learning, the neuromuscular system, and reviews of relevant basic science concepts from chemistry, biology, and physics. Incorporating these concepts into these particular courses will enable students to more effectively engage in laboratory and case-study work in upper-level classes, and better prepare them for HP 3550, HP 3560, and HP 4170. Lastly, Faculty will create syllabi for all Health and Exercise Science courses to incorporate the introduction of upper-level exercise science content, especially those related to the neuromuscular system, biomechanics, motor learning, fitness assessment and components of fitness and health, in lower-level courses to provide a strong foundation for HP 3550, HP 3560, and HP 4170.

Measure: 2.2. (Direct -- Knowledge)

Students will be able to understand and identify the correct prescriptive activity and the duration of exercise needed to satisfy the outcome required by the respective scenario(s). This will be determined with 75% of the students earning a score at least 80% on semester course exams.

Finding: Target was not met.

Analysis:

In AC 2023-2024, the target was met. Based on an analysis of the data, the following changes were made in AC 2024-2025 to continue the cycle of improvement: In AC 2024-2025, students enrolled in HP 4170 experienced enhanced laboratory experiences with workforce applicable skills. The Exercise Physiology Laboratory was updated with current technology and experiences for students. Additionally, Health and Exercise Science faculty worked together to create a curriculum plan for ensuring these critical concepts are introduced and reinforced in the relevant prerequisite coursework, including HP 2630, HP 3550, and HP 3560, among others.

In AC 2024-2025, two sections of HP 4170 were taught: one in Fall 2024 (n = 13) and one in Spring 2025 (n = 22). All students took the final exam, and of them,

approximately 17% of them (6/35) received a score on the final exam of 80% or higher. This represents a decrease from AC 2023-2024, in which 43.75% (7/16) received a grade of 80% or higher on the final exam. The performance in AC 2024-2025 falls below the desired 75% of students specified in Measure 2.2; however, the majority of students did pass their final exams with a 70% or higher. This finding suggests that students have an acceptable level of understanding in exercise science, but that students may lack the necessary higher-level types of knowledge for effective application, analysis, and evaluation.

Decision.

In AC 2024-2025, the target was not met.

Based on an analysis of the data for AC 2024-2025, the following changes will be made in AC 2025-2026 to continue the cycle of improvement: Students' ability to prescribe exercise and modifications with accuracy in critical. Therefore, moving into AC 2024-2025, students enrolled in HP 4170 will continue to experience the enhanced laboratory experiences offered by the updated Exercise Physiology Laboratory and new faculty members. Due to the improvements in prerequisite coursework in AC 2024-2025, as well as the addition of BIOL 1010 and 1011 as a requirement for all Health and Exercise Science majors, it is anticipated that performance on assignments relevant to Measure 2.2 will improve in AC 2025-2026, thereby continuing to push the improvement cycle forward.

SLO 3: The student will be able to demonstrate the ability to administer test protocols for evaluating the components of physical fitness.

Course Map: Tied to syllabus course objectives below.

- HP 3560: Exercise Physiology
- HP 4170: Testing, Evaluation, and Prescription of Exercise in Health and Human Performance
- HED 3000: Community Health Promotion

Measure 3.1. (Direct – Skill / Ability)

The student will earn a performance evaluation score of 70% or higher in the administration of testing protocols for various physical fitness components through laboratory experiences. This will be determined with 75% of the students earning a score at least 80% on semester course exams.

Finding: Target was met.

Analysis:

In AC 2023-2024, the target was not met. Based on an analysis of the data, the following changes were made in AC 2024-2025 to continue the cycle of improvement: In AC 2024-2025, it was recommended that faculty develop course materials and lesson plans focusing on the administration of fitness assessments and also the appropriate interpretation of results, while avoiding final exam grades as measures. While scores on laboratory exercises and final exams in HP 3560 are adequate, students seem to struggle with the more complex content taught in HP 4170. Therefore, incorporating fitness testing protocols, contraindications, modifications, and applications into other prerequisite coursework like HP 2530 and HP 3550 benefited students when they approached their senior-level coursework.

Therefore, to determine student performance on the administration of testing protocols, data was collected from courses that incorporated laboratory and/or application-based testing protocol activities. Courses fitting this requirement include two sections of HP 3560 (n = 21) and two sections of HP 4170 (n = 35). Of these students, 98.2% of students (55/56) passed the laboratory activities focusing on testing protocols. Because of changes in course content for HP 4170 and HP 3560, which included adjustments to the amount, content, and quality of laboratory-based assignments and lessons, it is not possible to directly compare performance on Measure 3.1 between AC 2024-2025 and AC 2025-2026. Despite this, it can be assumed that improvements have been made, considering that the data utilized for AC 2024-2025 suggested that the target for Measure 3.1 was not met. As prerequisite curricula and laboratory resources continue to improve, it is anticipated that performance in AC 2025-2026 is likely to reflect a similarly high level of success.

Decision.

In AC 2024-2025, the target was met.

Based on an analysis of the data for AC 2024-2025, the following changes will be made in AC 2025-2026 to continue the cycle of improvement: In AC 2025-2026, it is recommended that faculty continue to develop course materials and lesson plans focusing on the administration of fitness assessments and also the appropriate interpretation of results, and that these course materials are incorporated earlier in the curriculum and utilized throughout the HES curriculum. Students seem to find the more complex content taught in HP 4170 to be very challenging. Therefore, incorporating fitness testing protocols, contraindications, modifications, and applications into other prerequisite coursework like HP 2000, HP 2530, and HP 3550 will continue to have students better prepared for when they approach their senior-level coursework.

Measure 3.2. (Direct – Knowledge)

Students will correctly select the appropriate test protocol to be used in various physical fitness and exercise settings (corporate, recreational, clinical, and/or commercial). This will be determined with 75% of the students earning a score of at least 70% on semester course exams.

Finding: Target was met.

Analysis:

In AC 2023-2024, the target was met. Based on analysis of data from AC 2023-2024, the following changes were made in AC 2024-2025 to continue the cycle of improvement. Faculty in the Health and Exercise Science program focused on presenting fitness assessment opportunities to students, especially in the second and third years of the program, so that the hands-on laboratory experience in upper-division coursework would be more meaningful, allowing students to focus on more complex ideas and application to the real-world settings and scenarios they will be working in.

To determine student performance on Measure 3.2, data was collected from three courses: three sections of HP 3000 (*n* = 82), three sections of HP 3560 (*n* = 29), and two sections of HP 4170 (*n* = 35). During AC 2024-2025, 130 of 146 students (89%) achieved final exam scores of 70% or higher, indicating that the target score of 75% of students was met for Measure 3.2. Although performance on Measure 3.2 slightly declined in AC 2024-2025 from AC 2023-2024, in which 94.19% of students achieved 70% or higher on their final exams in these courses, student performance remains high and well above the goal threshold.

In HED 3000, HP 3560, and HP 4170, students learn about the various settings in which fitness and wellness testing are utilized (corporate, recreational, clinical, and commercial settings), and which methods are most appropriate and practical to meet the goals of the professionals and clients in those settings. Students in these courses were able to adequately identify the appropriate testing protocols that are used in these various settings, knowledge that is directly applicable to our pre-professional students (pre-physical therapy, pre-occupational therapy, pre-athletic training), as well as students interested in other allied healthcare, fitness, and sports settings. Knowledge derived from these courses will enable Health and Exercise Science students to bring their expertise to multiple work settings.

Decision.

In AC 2024-2025, the target was met.

Based on analysis of data from AC 2024-2025, the following changes will be made in

AC 2025-2026 to continue the cycle of improvement. Faculty in the Health and Exercise Science program will focus on presenting fitness assessment opportunities to students, especially in the second and third years of the program, so that the hands-on laboratory experiences in upper-division coursework are more meaningful and can focus on more complex ideas and application to real-world settings and the scenarios they will be working in. Additionally, faculty will provide course materials and applicable activities that encourage students to spend more hours improving their ability to administer test protocols for evaluating the components of physical fitness.

Comprehensive Summary of Key Evidence of Improvement Based on Analysis of Results.

Program faculty made several decisions after examining results of data analysis from AC 2023-2024 which resulted in improved student learning and program improvement in AC 2024-2025.

- Faculty engaged Health and Exercise Science students with unique instructor-generated case scenarios, the application of skills, abilities, and theories to course curriculums. This curriculum is a face-to-face program, with strong emphasis on hands-on learning.

- Faculty taught HP 4170 in lab-like conditions, as students evaluated case studies and wrote protocols for activity-based prescription treatments.

- Faculty provided students with enhanced experiences in the updated Exercise Physiology Laboratory space, enabling students to utilize new and updated equipment used for fitness and wellness testing.

- Faculty updated the Health and Exercise Science curriculum to be in-line with industry standard and professional school programs, integrating more coaching and fitness-based coursework to prepare students to be successful in internships and a variety of workplaces.

- The department hired one new Assistant Professor with a Doctorate in Physical Therapy, enhancing the experience of students in HP 3550, HP 3560, and HP 4170 and increasing academic rigor in the Health and Exercise Science program.

Summary Plan of Action for Moving Forward:

Program faculty examined the evidence and results of data analysis from AC 2024-2025 and will take steps to continue to improve student learning in AC 2025-2026:

- SLO 1: Faculty will work together to restructure the student learning outcomes to align with the updated Health and Exercise Science curriculum and national

standards, as well as determine precise measures to determine student achievement.

- SLO 2: Faculty will create syllabi for all Health and Exercise Science courses to incorporate the introduction of upper-level exercise science content, especially those related to the neuromuscular system, biomechanics, motor learning, fitness assessment and components of fitness and health, in lower-level courses to provide a strong foundation for HP 3550, HP 3560, and HP 4170.

- SLO 3: Faculty will provide course materials and applicable activities that encourage students to spend more hours improving their ability to administer test protocols for evaluating the components of physical fitness.