

Assessment Cycle 2018-2019

Health and Exercise Science (377)

College: Gallaspy College of Education and Human Development

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Northwestern State University of Louisiana's Mission. Northwestern State University is a responsive, student-oriented institution that is committed to the creation, dissemination, and acquisition of knowledge through teaching, research, and service. The University maintains as its highest priority excellence in teaching in graduate and undergraduate programs. Northwestern State University prepares its students to become productive members of society and promotes economic development and improvements in the quality of life of the citizens in its region.

Gallaspy College of Education and Human Development is a committed and diverse community of scholars, educators, students, and future leaders working collaboratively to acquire, create, and disseminate knowledge through transformational, high-impact experiential learning practices, research, and service. The College produces graduates with the capabilities and confidence to be productive members of society equipped with the skill sets necessary to promote economic and social development thereby improving the overall quality of life in the region. The College offers a wide variety of exemplary undergraduate and graduate programs that prepare candidates for career success across the spectrum of professional roles and setting. These programs include teacher education, leadership, and counseling; health and human performance; psychology and addiction studies; social work; and military science. Candidates are taught to become adaptive critical thinkers and problem solvers in diverse scenarios capable of leveraging new technologies to enrich lifelong learning. As caring, competent, reflective practitioners, our graduates become positive role models in their communities and leaders in the nation's military.

Department of Health and Human Performance's Mission. The Department of Health and Human Performance at Northwestern State University of Louisiana provides training for health, physical education, exercise science, and sport professionals. Dedicated faculty and staff members build student knowledge through the discussion and utilization of current practices, topics, and trends to optimize classroom engagement. The department goals align with the Gallaspy Family College of Education and Human Development, as faculty and staff members actively implement transformational, high-impact experiential learning practices, research, and service for a diverse population of learners. Students may earn one of three degrees – Bachelor of Science in Health and Exercise Science, Bachelor of Science in Health and Physical Education, or Master of Science in Health and Human Performance. Additionally, students in the Department of Health and Human Performance participate in competitive internships in a wide variety of locations

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Health and Exercise Science Program Mission Statement: Through the completion of program requirements for Health and Exercise Science, students will gain a distinct appreciation for the employment opportunities within the four segments of the Health and Exercise Science industry. 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 transitional field.

Purpose (optional): The Bachelor's program will prepare students for entry positions in the health and fitness industry in which the ability to comprehend, influence, and respond to the fitness needs of the industry clients is necessary. It will also prepare interested students for the pursuit of further / additional advanced degrees in Health and Human Performance such as Health Promotion or Sport Administration, as well as professional clinical programs to include Physical or Occupational Therapy.

Methodology: The assessment process for the HAES 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

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Measure 1.1. (Direct – Knowledge)

On an annual basis, students enrolled in HP 2000, HP 2270, HED 3000, HP 3550 and HP 3560, all required courses for HAES Bachelor students, will be administered course exams designed to evaluate the student knowledge and understanding of the foundational concepts, theories, strategies, and challenges of the four segments 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:

AY 2018-2019: Target not met. 69.54% of HHP students achieved 70% or higher on exams for courses listed in Table #1.

AY 2017 – 2018: Target met. 82.5% of HHP students achieved 70% or higher on exams for courses in Table #1

AY 2016 – 2017: Target Met. 75% of HHP students achieved 70% or higher on exams for courses listed in Table #1

Table #1

Course	Fall 2018			Spring 2019		Percent Total
	Mid-Semester	Final		Mid-Semester	Final	
HP 2000	23 of 24	23 of 24		30 of 33	31 of 33	94.73%
HP 3560-1	6 of 15	6 of 13				46.15%
HP 3560-2	8 of 14	2 of 14				14.29%
HP 3561-1	12 of 18	13 of 17				76.48%
HP 3561-2	7 of 13	8 of 12				66.61%
HP 4170	3 of 3	3 of 3		4 of 8	7 of 8	87.50%
HP 3550 -1				9 of 29	12 of 26	46.15%
HP 3550 -2				8 of 16	6 of 15	40.00%
HED 3000				31 of 32	31 of 32	97.00%

Analysis: In AY 2016 – 2017 and AY 2017-2018, target was met, as 75% and 70% respectively of students in all classes listed were able to successfully describe basic knowledge of Health and Fitness industry standards by scoring 70% or higher on exams in courses listed. Faculty members for the courses indicated that the mid-term and final exams were more than adequate to evaluate the SLO. Therefore, in AY 2017 – 2018, HAES student assessment was based on mid-term and final examination data for each course, and students exceeded the SLO goal with 70.92% of enrolled students being able to describe a basic knowledge of the Health and Fitness industry standards by scoring 70% or higher on the exams. AY 2018-2019 analysis indicates that only 69.54% (137 of 197) of students were able to describe a basic knowledge of the Health and Fitness industry standards by scoring 70% or higher on the exams, for classes listed in Table #1. The lowest performance occurred again in Exercise Physiology HP

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3560 (2) (fall only courses) where only 14.29% (2 of 14) of students enrolled were able to describe a basic knowledge of the Health and Fitness industry standards by scoring 70% or higher on the exams. Based on recommendations from fall 2017-2018, a new faculty member was hired, and 2 site supervisors were invited to the classes to encourage and engage student interest in internship opportunities.

Action - Decision or Recommendation: Based on information gathered from analysis of the AY 2018-2019, there was a low performance result in the courses (HP 3560 and HP 3550) among the majors enrolled. The new faculty member recently hired will work to develop new and unique teaching strategies to engage students more deeply in the difficult subject matter. Testing formats have already been revised, and in-class assignments have been increased. Class schedules have been rearranged to include the 3-day per week time meeting. The extra day (MWF vs. TR) will provide a stronger bridge between class lectures while providing extra time for students to visit the subject matter. HHP will report the mid-term and final evaluation in the respective courses as reflective of learning outcome successes.

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: AY 2018 -- 2019 Target Met. 87.80% of students scored 70% or higher on the designated exercises.
AY 2017 – 2018 Target met
AY 2016 – 2017 Target Met

Table #2

Course	Fall 2018			Spring 2019		Percent Total
	Mid-Semester	Final		Mid-Semester	Final	
HP 3561-1	12 of 18	13 of 17				76.50%
HP 3561-2	8 of 13	9 of 12				75.00%
HP 4170	4 of 4	4 of 4		5 of 8	7 of 8	87.50%
HED 3000				38 of 41	39 of 41	95.12%

Analysis: In AY 2016 – 2017, Health and Exercise Science students exceeded this goal, as 91.9% of students scored higher than 75% on final exams. As a result of changes made to curriculum, and with the addition of yet another new faculty member, in AY 2017-2018, 97.5% of students exceeded the SLO that 75% of the students will

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score 70% or higher on these exercises. In fall, 2017, HP 4170 returned to the classroom in a face-to-face teaching format. In all classes listed, students successfully demonstrated critical thinking and problem-solving skills through a variety of case studies, as well as scenario-driven exercises, 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. After examining the evidence from last year, faculty decided that the evidence gathered from the mid-term and the final evaluations were indicators of student success with these measures. Students were successful in specifically addressing case studies and the application of knowledge and understanding of the foundational concepts, theories, strategies, and challenges as applied to the four segments of the Health and Fitness industry. In AY 2018 – 2019, 87.80 percent of the students were able to score 70% or higher on exams in these courses. Students do well with this “hands-on” aspect of our curriculum in HHP.

Action - Decision or Recommendation: Moving forward to AY 2019 – 2020, 100% success rate would not be out of reach. Bringing in former students as guest speakers to illustrate the use and performance of these courses in the real world would enhance the learning opportunity for said students, and perhaps elevate the successful percentage rate above the current 91%. A physical therapist is scheduled to visit the class in the fall of 2019 to point out the importance of exercise physiology to overall health and injury recovery. As students gather a more complete understanding of the coursework design related to the real world, then perhaps classroom performance will be higher. Additionally, faculty have determined that to maximize student learning and to improve the program, the faculty will introduce innovative case studies into other courses in the program which should further assist student success in preparation for upper level coursework and the internship. Some students are seeking out the Medical Terminology course (as Advisor Approved Elective) to enhance their HHP curriculum.

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

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outcome and actionable recommendations based on the scenario(s). 75% of the students will score 80% or higher on these exercises.

Finding: AY 2018 – 2019 Target met (Table #3)
AY 2016 – 2017 Target was not met
AY 2017 – 2018 Target was met

Table # 3

Course	Fall 2018			Spring 2019		Percent
	Midterm	Final		Midterm	Final	
HP 4170	4 of 4	4 of 4		4 of 8	7 of 7	100%

Analysis: In AY 2016 – 2017, students failed to meet this goal, as only 46.42% of students (13 out of 28) score 80% or higher on these exercises. HHP introduced a new faculty member to the program in the fall of 2016, and the course guidelines and syllabi were changed to reflect this new direction of case scenarios. This new method of progression and using real-life cases presented the students with academic challenges for implementing critical thinking and problem-solving skills and theories. Additionally, the course was offered in an on-line format, which is not conducive to the hands-on approach in a laboratory. In AY 2017 – 2018, Health and Exercise Science students met this goal as 95% of the students scored higher than 80% on these exercises, in a face-to-face laboratory setting. In 2018-19 (Table 3 Above) 100% of the students met the target. HP 4170 (Testing, Evaluation and Prescription of Exercise in HHP) is a course in which students reviewed and studied several cases dealing with health threatening conditions. Upon defining the respective physical restrictions, students then addressed these conditions through proper prescription of exercise and duration, to determine strength and conditioning, flexibility, endurance, and aerobic capacity as needed in each case. In all classes listed, students successfully demonstrated critical thinking and problem-solving skills through a variety of case studies, as well as scenario-driven exercises, in which they were required to analyze and develop a response to a health and exercise related situation. In the analyses of these responses, students successfully demonstrated proper response and actionable recommendations based on the information presented. This is one of the best courses in the program for preparing the student to deal with real-life situations, and to provide a prescription of physical activity as a remedy.

Action - Decision or Recommendation: Moving forward to AY 2019-2020, we recommend offering the course in the face-to-face format. The assessment for this measure should be the final examination grade for the course, as the final examination provides the student with an instructor-derived scenario(s), that requires a comprehensive effort from the student to apply the knowledge and skills reviewed and learned from the semester. Additionally, faculty have determined that to maximize student learning and to improve the program, the faculty will introduce innovative and unique case studies into other courses in the program which should further assist student success in preparation for upper level coursework and the internship.

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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: AY 2018 – 2019 Target Met (Table #4)
AY 2016 – 2017 Target Not Met
AY 2017 – 2018 Target met

Table # 4

Course	Fall 2017			Spring 2018		Percent
	Midterm	Final		Midterm	Final	
HP 4170	4 of 4	4 of 4		4 of 8	7 of 7	100.00%

Analysis: In 2018-19, 100% of the students (11 out of 11) successfully completed the mid-term and final exam and were able to correctly and thoroughly identify the necessary prescriptive activity and the duration of exercise needed, to satisfy the outcome required by the respective scenario(s), specifically, that 75% of the students earning a score at least 80% on semester course exams. This is an improvement over 2017-18 as the target was not met last year.

Action - Decision or Recommendation: Moving forward to AY 2019-2020, we recommend offering the course in the face-to-face format. The assessment for this measure should be the final examination grade for the course, as the final examination provides the student with a unique, instructor-derived scenario, that requires a comprehensive effort from the student to apply the knowledge and skills reviewed and learned from the semester. This is one of the best courses in the program for preparing the student to deal with real-life situations, and to provide a prescription of physical activity as a remedy.

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 course syllabus below.

HP 3561: Exercise Physiology Laboratory

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

HED 3000 – Personal and Community Health

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Measure 3.1. (Direct – Skill / Ability)

The student will earn a performance evaluation score of 80% 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: AY 2018 – 2019: Target Met (Table #5). 75.00% students earned a score of at least 80% on semester course exams.
AY 2016 – 2017: Target Met
AY 2017 – 2018: Target met (Table #5).

Table #5

Course	Fall 2017			Spring 2018		Percent Total
	Mid-Semester	Final		Mid-Semester	Final	
HP 3561-1	8 of 18	11 of 17				64.70%
HP 3561-2	5 of 13	3 of 13				23.07%
HP 4170	4 of 4	4 of 4		4 of 8	7 of 7	100.00%
HED 3000				38 of 41	39 of 41	95.12%

Analysis: In AY 2016 – 2017, even though evidence indicated that the scores were low for HP 4170 (44.82%), at least 75% of the students successfully demonstrated proper administration of testing protocols for various physical fitness components through laboratory experiences. Low performance was addressed in curriculum structure for AY 2017 – 2018, with the addition of a new faculty member and expectation that scores would change in a positive direction. Lab classes were expanded into two sections, and two separate days of the week. HP 4170 case studies were moved from published journal case studies, to unique, instructor-generated cases, that were sensitive to specific student needs. Evidence from the AY 2017 – 2018 assessment cycle has indicated a positive change in the HP 4170 scores (90%), and the overall student success of 92.56% (112 / 121) earning a score at least 80% on semester course exams. In AY 2018 – 2019, students continued to be successful in these laboratory settings, in the HHP curriculum, with 75% of the students earned a minimum score of 80% on exams.

Action - Decision or Recommendation: Moving forward to AY 2019-2020, the recommendation is to use the present format to introduce students to concepts of prescriptive exercises through additional HAES courses and with the biology prerequisites. The HP 3561 labs do address prescriptive exercise activity for HHP students, and prescriptive activity is currently covered in HP 3560 and HP 4170 textbooks respectively. The mid-term and final evaluation satisfy the current assessment need ($\geq 80.00\%$) through both courses (HP 3561 and HP4170), and thus should be used as a tool for assessment. The final exam in HP 4170 specifically addresses the prescription of physical activity as a treatment for a variety of physical debilitations

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and clinical rehabilitations and should thus be used as an assessment tool. Students review a variety of case studies throughout the course duration, and then test over an assigned scenario(s) from the instructor for the final exam. This prepares the students for an internship at a fitness / wellness club (Recreational and Commercial segments of the Fitness Industry), and to be able to assess physical performance levels, and provide subsequent prescriptive activity to address training needs. Through this internship opportunity, under the watchful eye of the site supervisor, students are provided the opportunity to apply the knowledge and skills reviewed and learned from HP 4170, into a real-life setting.

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 at least 80% on semester course exams.

Finding: AY 2018 – 2019: Target NOT met (Table #6). 68.01% of students earned a score of at least 80% on semester course exams.

AY 2016 – 2017: Target Met

AY 2017 – 2018: Target met

Table #6

Course	Fall 2018			Spring 2019		Percent Total
	Mid-Semester	Final		Mid-Semester	Final	
HP 2000	23 of 24	23 of 24		30 of 33	31 of 33	95.00%
HP 3560-1	19 of 30	12 of 26				46.00%
HP 3560-2	10 of 18	3 of 18				16.67%
HP 3561-1	16 of 22	16 of 22				72.72%
HP 3561-2	10 of 18	10 of 17				58.87%
HP 4170	3 of 3	3 of 3		6 of 12	10 of 11	93.33%
HP 3550 -1				11 of 30	15 of 29	51.72%
HP 3550 -2				8 of 21	6 of 20	30.00%
HED 3000				31 of 32	31 of 32	97.00%

Analysis: In AY 2016 – 2017, 84% of students enrolled in classes which provided evidence for analysis (247 out of 294), correctly selected the appropriate test protocol used in various physical fitness and exercise setting scenarios in the four segments of the fitness industry (corporate, recreational, clinical and/or commercial). The data analysis included HP 2270, which has been omitted for the present cycle. Without the data for HP 2270 in AY 2016 – 2017, 82.75% of the students enrolled in classes which provided evidence for analysis (192 out of 232), correctly selected the appropriate test protocol in the four segments of the fitness industry. In the AY 2017 – 2018

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Assessment Cycle, 83.40% of the students evaluated (201 / 241) correctly selected the appropriate test protocol used in various physical fitness and exercise setting scenarios in the four segments of the fitness industry (corporate, recreational, clinical and/or commercial). In AY 2018 -- 2019, 68.01% (160 out of 235) earned a score of at least 80% on semester course exams, while the target number was 75%. Obviously, low averages in HP 3560s and HP 3550 pulled the target SLO percentage down. Several adjustments have been made in these courses, and several more to take place in AY 2019 – 2020.

Action - Decision or Recommendation: Moving forward to AY 2019-2020, Faculty have reviewed the evidence to assess student learning, and based on this analysis, faculty will provide instructor-generated test protocol information in the respective courses presented in Table #6. The challenge is to get the students think critically and to be able to rationalize proper responses, rather than to provide memorized responses that fail to reflect engaged learning. This effort to engage in program improvement will strengthen student skill performance for selection of the appropriate test protocol, and further prepare the student for the internship experience that occurs during the last semester of the program.

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

Overall, student performance in the Health and Exercise Science degree program (HHP 377) is slightly above average.

- The curriculum courses in the HAES degree are supportive of the work force requirements to be successful in the four segments of the Fitness Industry (Corporate, Recreational, Commercial and Clinical).
- The HAES curriculum is properly supported with Core and prerequisite courses, when presented in sequential order, completely prepare the student for the capstone experience in HHP
- Students are repeatedly exposed to both completers and professional staff from outside the University setting (HP 2000, and HP 3550, HP 4170 and HP 4180), speaking in support of the program and the importance of meeting the academic requirements for real-world success. Internship supervisors also meet this model.
- Faculty have added emphasis on current assessments to curricular programs, as a result of classroom visits and conversations with career professionals, in clinical and commercial segments of the fitness industry.
- Faculty have further enhanced the assessment of our current internship program through participation in the University QEP

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Plan of Action Moving Forward:

Faculty have examined the evidence and results of data analysis from AY 2018 – 2019 and will take steps to improve student learning in HHP for AY 2019 – 2020.

- Faculty will engage HAES students with unique instructor-generated case scenarios, and the application of skills, abilities and theories to course curriculums.
- This effort to engage in program improvement will strengthen student skill performance and further prepare the student for the internship experience that occurs during the last semester of the program.
- Faculty will add additional resources to the program that focus on the professional preparation of students to be successful in the internship and the work setting.
- Having a full-time, long-term instructor in the exercise science courses (HP 2270, HP 3560, HP 3561, HP 3550 and HP 4170) will challenge the students with consistent academic requirements for successful professional development. The presence of the full-time instructor has provided students with academic rigor and expected higher standards of performance. Students are slowly rising to the elevated levels of expectation.
- Moving Forward, HAES students' complete internships at the end of their curriculum and prior to graduation. These internships result in jobs and graduate school opportunities for program graduates. During the Exit Interview from the internships, students report that the program curriculum has properly prepared them for the internship experience, and upon completing a successful internship, prepared them for the work force. Spring 2019 exit interviews from 5 of 14 students returning from internship, have indicated that the presence of the new faculty member has provided increased awareness and preparation for challenges that occurred from the clinical settings where interns served.