

**COMPREHENSIVE PROGRAM
REVIEW (CPR)
FOLLOW-UP REPORT**

EXERCISE AND HEALTH SCIENCE PROGRAM

**Department of Health, Physical Education,
and Sport Science
Wellstar College of Health and Human Services**

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1. Provide evidence of *quality* enhancement of the program since 2003.

Since 2003, the Learning Outcomes were revised to align with the curricular guidelines established by the American College of Sports Medicine. Under this model, we developed five General Learning Outcomes with three to five Specific Learning Outcomes for each general one. The American College of Sports Medicine developed a designation of “Program Recognition” for those programs that meet their “Knowledge, Skills, and Abilities” (KSAs) for the Health/Fitness Instructor. This was the first step in a move by the American College of Sports Medicine to establish program accreditation for Exercise Science programs. Therefore, we completed a comprehensive evaluation of the Exercise and Health Science program to determine how well our program aligned with the 118 KSAs within the areas of anatomy and physiology, exercise physiology, human development and aging, pathophysiology/risk factors, human behavior and psychology, health appraisal and fitness testing, safety, injury prevention, and emergency care, exercise programming, nutrition and weight management, and program and administration/management. After a comprehensive review by the Exercise and Health Science faculty, we identified the following deficiencies in the program, specifically based on failure to meet KSAs:

- Ability to describe how each of the following differs from the normal condition: dyspnea, hypoxia, and hypoventilation
- Ability to describe the physiological and metabolic responses to exercise associated with chronic disease (heart disease, hypertension, diabetes mellitus, and pulmonary disease)
- Knowledge of common drugs from each of the following classes of medications and describe the principal action and effects on exercise testing and prescription. Antianginals, Antihypertensives, Antiarrhythmics, Bronchodilators, Hypoglycemics, Psychotropics, and Vasodilators
- Ability to identify the effects of the following substances on exercise response: antihistamines, tranquilizers, alcohol, diet pills, cold tablets, caffeine, and nicotine
- Ability to describe potential musculoskeletal injuries (e.g., contusions, sprains, strains, fractures), cardiovascular/pulmonary complications (e.g., tachycardia, bradycardia, hypotension/hypertension, tachypnea), and metabolic abnormalities (e.g., fainting/syncope, hypoglycemia/ hyperglycemia, hypothermia/hyperthermia).
- Knowledge of the initial management and first aid techniques associated with open wounds, musculoskeletal injuries, cardiovascular/ pulmonary complications, and metabolic disorders.
- Knowledge of the components of an equipment maintenance/repair program and how it may be used to evaluate the condition of exercise equipment to reduce the potential risk of injury.
- Ability to discuss the advantages and disadvantages of various commercial exercise equipment in developing cardiorespiratory fitness, muscular strength, and muscular endurance.
- Knowledge of NCEP II guidelines for lipid management.
- Knowledge of the health/fitness instructor’s supportive role in administration and program management within a health/fitness facility.
- Ability to describe and use the documentation required when a client shows signs or symptoms during an exercise session and should be referred to a physician.

- Knowledge of management of a fitness department (e.g., working within a budget, training exercise leaders, scheduling, running staff meetings).
- Knowledge of the importance of tracking and evaluating member retention.

The result of this self-study yielded a major curricular revision in the Exercise and Health Science major in 2004. Although there were a number of content changes within specific Exercise and Health Science courses, the more substantive changes including the addition of Anatomy and Physiology labs (BIOL 2221L and BIOL 2222L) to the curriculum. A new course was developed to address the clinical and programmatic/administrative deficiencies, which was HPS 4700 Clinical Aspects of Exercise. The program was restructured to remove the concentration areas. This was important as we move toward seeking Program Accreditation.

This curricular revision also afforded the opportunity to address another problem. We were concerned that some students were using the Pre-Professional option within our program as a means to avoid the internship. The intent of the Pre-Professional option was for students to take science-based credits to prepare them for Graduate study. Because the courses required for fulfillment of the Pre-Professional option were not clearly specified, some students were allowed to fulfill the requirements with less rigor than we believe appropriate. This “loophole” of using the Pre-Professional option to avoid the internship experience has subsequently been closed, as requirements for meeting the pre-professional option have now been clearly specified and consist mainly of pre-requisites for graduate education (e.g., Physics and Chemistry).

For the Exercise and Health Science program, students in conjunction with their Advisor select two 3000-4000 level General Electives. The intent of this is to provide for more intensive study in the area of Health Promotion for students with this interest (i.e., they select HPS 4200 – Contemporary Health Issues and HPS 4600 – Health Promotion Applications). For other students, these electives provide for the opportunity to broaden their knowledge within the field. We no longer allow students to use HPS 3398 – Internship to meet this General Elective requirement, because this course is duplicative of the capstone Internship experience. The Health and Physical Education (P-12 Teacher Education) program developed a new School Health Issues course; therefore, they no longer require HPS 4200 – Contemporary Health Issues. This has provided the opportunity to modify the course content to make the course more applicable to Exercise and Health Science.

As part of the Assurance of Learning process, we systematically evaluate the quality of teaching and learning in the Exercise and Health Science program. We utilize assessments from our On-Site Supervisors during the internship experience, a Student Analysis of Learning Outcomes, student performance in courses, and feedback from our Advisory Board. Several new assessments are planned for implementation in 2008. We are adding another measure of student learning in 2008 and we are revising our admission criteria for the Program and the Internship experience.

2. Provide evidence of *productivity* enhancement of the program since 2003.

- We moved into the new Convocation Center which provided much needed classroom and laboratory space to support this program. This enhanced productivity because it increased the ability to deliver the program which was growing very rapidly.
- We greatly expanded our laboratory equipment to include a bone densitometer, new hydrostatic weighing system, neuromuscular assessment system, two metabolic systems, a treadmill, an electromyograph, plethysmograph, biomechanical system, force platform, and various other smaller items. The equipment is utilized in multiple courses, and it exposes students to learning opportunities using state-of-the-art technology in their field of study. This additional equipment has allowed us to accommodate more students in our lab-based courses without sacrificing the hands-on opportunities for students.
- We have expanded the available number of seats in our introductory course (HPS 2100), reducing the number of faculty necessary to deliver this course. This allows faculty to be free to teach a greater number of upper-division courses in our program.
- A system of program coordinators has been implemented. Each program coordinator is now able to more closely monitor the needs of individual programs within our department.
- Growth of our departmental faculty (Drs. Hales, B. Johnson, McLester, D. Mitchell, Stickney, and Wickwire) has allowed the offering of multiple sections of upper-division courses during multiple time slots. This helps to meet student needs in terms of progressing through our program without course conflicts which facilitates a more timely graduation rate.
- The flexibility of our curriculum allows us to deliver our program without a strictly defined “entry point.” This has also contributed to our students being able to progress through the program at a faster rate.

3. Identify the action plans and priorities from the 2003 Follow-Up Report that have been accomplished.

- 1) We did not pursue “*Program Recognition*” through the National Strength and Conditioning Association or the American College of Sports Medicine. Since the follow-up report, the American College of Sports Medicine has partnered with the Commission on Accreditation of Allied Health Education Programs to begin accrediting “Exercise Science” programs. We are in the process of pursuing accreditation in the near future.
- 2) We have moved into the new Convocation Center which houses a new exercise physiology and a biomechanics laboratory. This has greatly improved our lab space.

- 3) We have continued to expand our internship opportunities for students. Currently we have over 400 sites with most in the metro Atlanta area.
- 4) We did not establish a new Major's Club for Exercise and Health Science. The Advisors have worked to make the Club better serve two majors and we believe the process has worked well.
- 5) Student involvement in the community and with the Wellness Center has greatly increased. Some examples include student work with local assisted living facilities along with health promotion projects delivered on campus and to community groups.

4. Identify the action plans and priorities from the 2003 Follow-Up Report that still need to be addressed and indicate a timeline for their completion. If specific action plans and priorities have changed since 2003, please explain.

As noted above, we did not pursue "Program Recognition" via the National Strength and Conditioning Association or the American College of Sports Medicine due the "Accreditation" process that has been recently established. Although exploration of options for program accreditation has begun, the process is not complete. We plan to continue our progress toward program accreditation in 2008-2009. We did not establish a new Major's Club for Exercise and Health Science, but have worked to make the Club better serve two majors.

5. Address the current status of the program's *viability*. If viable, justify whether the program should be sustained, reconfigured, or enhanced.

The Exercise and Health Science program is extremely viable. For FY2009, the program produced 63 graduates which ranks 12th among 43 undergraduate programs. This is a 103% growth rate over the past five years which ranks as the 3rd largest percent growth among programs with at least 50 graduates. We believe this program should be *sustained*.

a. Indicate how the program advances specific goals and action steps of KSU's Strategic Plan.

Through the Assurance of Learning process, we have continued to enhance the quality of our academic programs and to improve the delivery, both in quality and efficiency. We have been working to improve the advising process and to promote faculty mentoring. This will be more effectively achieved with the addition of an Advising Coordinator. We feel this will enhance the retention, progression, and graduation of our students. Consistent with this goal, we implemented a freshman Learning Community for our students this fall for our majors. Within our HPS 4730 "seminar" course, we have incorporated units related to leadership development and ethics for our majors, which aligns with KSU's Strategic Plan. We continue to excel in community based initiatives through our geriatric activity and health program (SPARHKS), internship/practicum

experiences, and health promotion activities. The faculty are actively engaged in scholarship including the acquisition of over \$500,000 in approved external funding in 2007, which includes a FIPSE (Fund for the Improvement of Post-Secondary Education) grant to develop a student focused international collaboration with two universities in Brazil.

b. Identify resources needed to strengthen the program's ability to meet the goals of KSU's Quality Enhancement Plan.

The Department of Health, Physical Education, and Sport Science has existing relationships with the Universidade Federal de Santa Catarina, Florianópolis, Brazil, the University of Amsterdam, Netherlands, the University of Pretoria, South Africa. These provide numerous international opportunities at KSU and the host institution. We were recently awarded a U.S. Department of Education grant to establish a consortium between KSU and two Brazilian institutions, Universidade Federal de Santa Catarina and the Universidade de Pernambuco. This program allows for the exchange of students between institutions over the next four years to study the etiology of obesity. This program initiative is certainly congruent with KSU's Quality Enhancement Plan. The primary additional resources needed would be support for *language acquisition* and *faculty efforts to expand/enhance global initiatives*, and *faculty opportunities for development*.

c. If the program is delivered off-campus, please provide a cost analysis of the off-site delivery.

N/A

d. Indicate the resources needed to sustain, reconfigure, or enhance the program's quality and productivity.

Resources needed to sustain and enhance our program include: larger laboratory space with supporting equipment (will be supported with the addition of the new Health Sciences building); support for faculty development; more faculty to support the program; and an advising coordinator to alleviate high faculty advising loads. It is important to note that our new MS in Applied Exercise and Health Science will begin in Fall 2008 which will impact the resources available to support this undergraduate program. We are looking at cost effective ways to improve efficiency, such as adding an Advising Coordinator. However, if this program maintains the current growth rate, the availability of sufficient faculty to support this program will become critical in two to three years.