

**Bachelor of Science in Human Performance
Program Review Report
2010**



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I. INTRODUCTION

Program review is a process of systematic review and evaluation of programs within a university that takes place at regular intervals. In addition to fulfilling state mandates, a program review facilitates ongoing improvement and planning. Additionally, it contributes to the body of information on institutional effectiveness presented by the university in its self-study for the Southern Association for Colleges and Schools (SACS), its regional accrediting body.

The following represents the results of an internal self-study by the faculty of the Human Performance (HP) Program, in the Department of Physical Therapy and Human Performance.

II. BACKGROUND

Florida Gulf Coast University (FGCU) became Florida's tenth university when it opened its doors on August 25, 1997 with just over 100 instructional faculty, two academic buildings, a library and approximately 2,500 students. The Southern Association of Colleges and Schools awarded FGCU accreditation candidacy later that year, and a comprehensive self-study was launched. The first commencement was held in May 1998, with 81 FGCU graduates. In the Fall of 2007, the University celebrated its tenth anniversary with an estimated enrollment of 10,000 students. In the *Quarterly Briefing* to the FGCU Board of Trustees in April, 2010, the enrollment of students was listed as 11,105. Academic colleges at FGCU include: the College of Arts and Sciences, the College of Education, the College of Health Professions, the College of Professional Studies, the Lutgert College of Business and the U.A. Whitaker School of Engineering.

The Department of Physical Therapy and Human Performance, in the College of Health Professions first offered a Bachelor of Science degree in Human Performance beginning in the Fall, 2002. The focus of the B.S. in Human Performance at that time was on both the preventative and restorative aspects of movement science. The degree program approved in June, 2002 had two concentrations available to students:

- *Athletic Training* –a concentration that academically prepared students to evaluate, advise, and treat athletes of any type and of all ages; to assist them to recover from injury, avoid injury; and/or maintain peak physical fitness
- *Physical Performance* – a concentration that focused on preparing students to analyze movement and maximize performance levels of high-level athletes, fitness-oriented persons, and special populations such as children and older adults through extensive evidence-based knowledge of the exercise sciences.

In the Spring of 2005, the two concentrations were dissolved and two separate majors were approved by the University Board of Trustees: Athletic Training (CIP 51.0913) and Human Performance (CIP 31.0505, Track 1 of 3).

The initial purpose of the HP program (physical performance concentration) was to educate students in the field of Human Performance so that they would have opportunities to serve others in careers in this dynamic growing field. Successful graduates were anticipated to find employment as:

- Exercise Physiologists
- Strength and Conditioning Coaches
- Cardiac Rehabilitation Specialists
- Corporate Wellness Specialists
- Health Promotion/Prevention Educators
- Youth Service Coordinators
- Resort and Hotel Fitness Specialists
- Intramural Directors
- Sports Camp Directors
- Recreation Specialists
- Activities Directors
- Fitness Directors
- Wellness Directors
- Personal Trainers

It was also anticipated that graduates of the HP program would be exceptionally qualified for graduate programs in the applied sciences, advanced degrees in athletic training or exercise physiology, or graduate programs in physical therapy or occupational therapy.

Initial planning for the HP program began in the summer of 2000 by the faculty of the then Department of Physical Therapy. During this timeframe the department faculty identified a need for an undergraduate program in the area of health, wellness, and athletic training. In December 2000, discussions were held between President Merwin and Deans Rokusek (College of Health Professions) and Byrnes (College of Education) about the possibility of offering an undergraduate degree program integrating wellness, health promotion, sports medicine, coaching, athletic training and exercise physiology.

In early 2001, Dean Rokusek, under the advisement of President Merwin, gave approval to the Department of Physical Therapy to continue the planning process of developing a new major in Human Performance. Also, during the Spring of 2001 members of both the Department of Physical Therapy and the newly created Intercollegiate Athletic Department held meetings about the viability of offering a degree in Human Performance. In June 2001, after a Human Performance/Exercise Physiology major was placed on the “approved list” compiled by the State University System for FGCU programs, the planning process was expedited.

During the fall semester of 2001, the planning process continued involving the Department of Physical Therapy, Intercollegiate Athletic Department, Office of Planning and Evaluation, Provost Bartel, members of Library Services, Dean Rokusek, consultants Jason Craddock, MS, ATC, Mike Estes, MS, ATC and Dennis Hunt, EdD, CSCS. In December 2001, Provost Bartel approved the continued process of developing the HP program with a proposed implementation date of Fall 2002.

In January 2002, three focus groups met on the FGCU campus to discuss the possibility of offering a Human Performance program. Members of the focus groups included orthopedic surgeons, certified athletic trainers, and wellness/fitness professionals from the FGCU service area. There was unanimous agreement among the members of the focus groups in supporting the HP program proposal and the Human Performance program. Additionally, in January 2002, faculty of the Physical Therapy Department met to further define, develop, and approve the curriculum for the Human Performance program. In February 2002, the College of Health Professions Curricular Affairs Committee met and approved the HP program proposal.

In March 2002, President Merwin, Provost Bartel, and Dean Rokusek gave unanimous support for the continuing of the planning process. Also, during March 2002 members of the Office of Planning and Evaluation provided feedback on the program proposal draft and made necessary revisions.

In April 2002, the HP program proposal was approved by the University's Undergraduate Curriculum Team (UCT). Upon obtaining the approval from the UCT, the HP program proposal was disseminated by members of the Academic Affairs office to the FGCU Board of Trustees. The FGCU Board of Trustees voted unanimously on June 20, 2002 to approve the HP program and allow FGCU to offer an undergraduate degree program in Human Performance. In August 2002, the first students were admitted into the HP program.

The collaborative process for the initial planning and adoption of the Bachelor of Science degree in Human Performance involved the following:

- President William Merwin
- Provost Brad Bartel
- Dean Cecilia Rokusek, College of Health Professions
- Dean Larry Byrnes, College of Education
- Ms. Ellen Williamson, Assistant Dean of CHP/Chair PT Dept.
- Faculty of Physical Therapy Dept.
- Dr. Dennis Hunt, CSCS, Certified Strength & Conditioning Specialist
- Mr. Carl McAloose, Director of Intercollegiate Athletics
- Mr. Jason Cobb, Director of Recreation Leisure Services
- Library Services
- Mr. Mike Estes, MS, ATC Naples Community Hospital and Head Athletic Trainer FGCU
- Mr. Jason Craddock, MS, ATC Sports Specialty Rehab
- CHP Curriculum Affairs Committee

- University Undergraduate Curriculum Team
- Three focus groups: orthopedic surgeons, athletic trainers and wellness/fitness professionals.

Finally, consultation with staff members in the FGCU Office of Planning and Evaluation, now the Office of Curriculum and Instruction, has been ongoing since the initiation of the program planning process and implementation. The Dean, Provost, and University President have also been kept informed of program development activities through formal and informal meetings.

III. MISSION STATEMENTS

A. University Mission Statement

“Established on the verge of the 21st century, Florida Gulf Coast University infuses the strengths of the traditional public university with innovation and learning-centered spirit, its chief aim being to fulfill the academic, cultural, social, and career expectations of its constituents.

Outstanding faculty uphold challenging academic standards and balance research, scholarly activities, and service expectations with their central responsibilities of teaching and mentoring. Working together, faculty and staff of the University transform students’ lives and the southwest Florida region.

Florida Gulf Coast University continuously pursues academic excellence, practices and promotes environmental sustainability, embraces diversity, nurtures community partnerships, values public service, encourages civic responsibility, cultivates habits of lifelong learning, and keeps the advancement of knowledge and pursuit of truth as noble ideals at the heart of the university’s purpose.” (*adopted by UBOT 1/19/2010*)

B. College Mission Statement

“The College of Health Professions provides students with health professions education that is grounded in academic excellence, fosters critical thinking and ethical practice, and promotes interdisciplinary collaboration. Faculty in baccalaureate and graduate educational programs facilitate development of active learning, emphasize evidence based practice, utilize multiple delivery systems, develop inter-professional relationships, and cooperate with community partners to prepare competent and caring health professionals.”

C. Department Mission Statement

“The Mission of the Department of Physical Therapy and Human Performance is to promote expertise in human movement, exercise, and wellness across the lifespan. The faculty foster the development of self-directed, life-long learners through an applied scientific basis of practice, community involvement, an integrated curriculum, and

interdisciplinary opportunities. The Department contributes to the advancement of the professions by demonstrating leadership and scholarship and promoting tolerance by valuing diversity.”

D. Program Mission Statement:

“The mission of the human performance program is to prepare students to enter existing practice in the emerging and diverse field of human performance with a base of knowledge formulated from an evidence-based curriculum. Students are well equipped to become critical thinking professionals, capable of leading wellness, physical fitness, exercise and strength and conditioning programs with diverse populations. A leadership foundation is established by empowering students to synthesize current information, draw inferences and establish prudent strategies that will help individuals in the communities that they serve with appropriate solutions to their human performance challenges.

Through an exposure to faculty instruction, scholarly activities, community and professional service graduates are prepared to shape the field of human performance in southwest Florida in the 21st century. Graduates of the Human Performance program have the opportunity to become skilled, knowledgeable, self-directed, flexible, and compassionate professionals.”

IV. PROGRAM DESCRIPTION

A. Community Analysis

The Human Performance graduate will have the opportunity to find career prospects in private and public corporations, hospital-based wellness programs, private health fitness facilities, personal training businesses, secondary and higher education, professional sports franchises, recreation programs, resorts, youth agencies and sports camps. Their customized education in movement sciences will provide the knowledge, skills and abilities to take on leadership and entrepreneurial roles within these career settings.

The promotion of a more active lifestyle is one of the many benefits associated with living in Florida. Locally, thousands of people each year participate in recreational sports and weekend sporting events. Physical fitness continues to be promoted to maximize lifespan independence, increase quality of living and promote healthy longevity. The promotion of a physically fit lifestyle to decrease lifestyle-centered diseases (e.g. Type II diabetes, Obesity, Heart Disease, etc.) strengthens the need for producing Human Performance professionals.

Gary Jackson, Director of the Regional Economic Research, stated in his seminal **External Environmental Scan** for FGCU’s Strategic Planning Process for 2010-2015 that “there is a long-term shift to service-providing employment away from goods-producing industries. Goods-producing industries are expected to lose employment over the 2006 to 2016 period while service-producing industries are expected to add 15.7 million new jobs to the U.S. economy. Occupations in health, education, sales, food

service, and office and administrative services are predicted to create the most positions between 2006 and 2016.” He further stated that the primary industries for Southwest Florida have been tourism and hospitality, retail trade, health care, and construction-related industries. He presented data that suggests that professionals who have a background in Human Performance will be in one of Florida's Top 25 High Growth Occupations Requiring a Bachelor's, Master's or higher degree between 2008 and 2016.

Initial support for the Human Performance program was demonstrated at focus group meetings at which leaders from fitness facilities strongly supported the initiation of a Human Performance program to develop future leaders in the areas of wellness, physical fitness, and performance enhancement. Additionally, interscholastic athletic directors surveyed prior to the initiation of the Human Performance program indicated a strong desire to hire individuals trained to perform strength and conditioning duties versus having sport specific coaches supervise athletic enhancement programs. This support has not wavered since the initiation of the program in fall 2002.

The Bureau of Labor Statistics compiled by the US Department of Labor and noted previously that the potential of FGCU Human Performance program graduates to find successful careers is probable based on projected job growth trends in the areas of recreational and fitness activities for older adults. They predict more professionals will be needed as businesses in general will continue to recognize the benefits of fitness programs and other services that could be provided as part of comprehensive wellness (health) programming.

Today's consumer is more knowledgeable in the areas of human performance, physical fitness, and personal training for wellness. Consumers of the 21st century demand an educated and credentialed professional to work with them in a variety of settings. The Human Performance program continues to address current and growing consumer demand locally, regionally and nationally.

Finally, in surveys completed in the Fall of 2008 and Spring 2009, FGCU Human Performance Program Experiential Learning Site Directors indicated that the students coming from the HP program are grounded in the fundamentals of exercise sciences imbued by the National Strength and Conditioning Association (e.g. NSCA--Education Recognition Program criteria) and/or American College of Sports Medicine guidelines (i.e. ACSM's -- Knowledge, Skills and Abilities – KSAs). They indicated that because of the prevailing emphasis on applied learning, students demonstrate a professional image and respond in an appropriate evidence-based professional manner in the community setting. Overall, the site directors returning program surveys indicated that students coming from the FGCU Human Performance program reflect very well on FGCU and the HP program.

B. Program overview

Human Performance embraces the study of the physical, social, emotional, intellectual and spiritual dimensions of movement. In particular, the Human Performance program at

FGCU provides the opportunity for students to learn how the body responds to activity and exercise throughout the lifespan. The emphasis of the program is to teach students how the body can attain a higher level of wellness and/or increase performance capabilities. Students majoring in Human Performance at FGCU have an opportunity to become well-prepared practitioners in their chosen field by utilizing the strong science preparation and interdisciplinary professional skill development in the curriculum. An additional unique aspect of the FGCU program is the applied (i.e. laboratory) and critical thinking learning activities that are utilized during the final 60 semester hours of the Human Performance Program.

The Human Performance program at FGCU prepares graduates for entry level careers that deal with the enhancement of individual health and/or performance capabilities. The graduate of the HP program receives a Bachelor of Science degree in Human Performance and is provided an appropriate background to pursue graduate studies in exercise science or other health-related disciplines.

The emphasis in the Human Performance major continues to be to educate students in how to direct an individual to increase his/her overall level of physical fitness and/or improve his/her performance level as it relates to physical function.

C. Course Offerings; Curricula

Initially, pre-human performance students must complete the University's General Education Program (GEP) requirements and also the HP program's pre-requisite courses.

1. FGCU -- GEP (36 hrs)

Visit the General Education Program web site for more information:

http://www.fgcu.edu/general_education/

- A. Communication (6 hrs)
 - 1. ENC 1101 (3)
 - 2. ENC 1102 (3)
- B. Mathematics (6 hrs)
 - 1. STA 2023 (3) recommended
 - 2. MAC 1105 (3) recommended
- C. Humanities (9 hrs)
 - 1. HUM 2510 (3)
- D. Social Sciences (6-9 hrs)
 - 1. PSY 2012 recommended
- E. Natural Sciences (6-9 hrs)
 - 1. BSC 1085C (4) recommended
 - 2. BSC 1086C (4) recommended
 - 3. CHM 1045C (4) recommended

2. Common Prerequisites (34 hrs) (for students matriculating in fall 2011)

1. BSC 1010L Gen'l Biology w/Lab (4)
2. BSC 1011L Gen'l Biology w/Lab (4)
3. BSC 1085C Anatomy and Physiology I w/Lab (4)
4. BSC 1085C Anatomy and Physiology II w/lab (4)
5. CHM 1045C General Chemistry I w/Lab (4)
6. CHM 1046C General Chemistry II w/Lab (4)
7. HSC 2577 Nutrition Human Health and Wellness (3) or 3 hours of General Nutrition
8. MAC 1147 Precalculus (4)
9. PSY 2012 General Psychology (3)

Upon completion of the GEP and common prerequisites and entry into the HP program the HP student must complete the following courses in order to apply to graduate from FGCU with a B.S. in Human Performance.

3. Required Courses in the Major (57 hrs)

- APK 3004C Foundations of Health Related Physical Fitness (3)
- APK 3312 Pharmacology and Ergogenic Aids (2)
- APK 3xxx Care and Prevention of HP Injuries (3)*
- APK 3xxx Athletic Health Care Management (3)*
- APK4110L Applied Exercise Physiology (3)
- APK4112 Sport and Exercise Psychology (3)
- APK 4113C Advanced Methods of Strength and Conditioning (3)
- APK4120C Clinical Exercise Physiology (3)
- APK4122L Environmental Exercise Physiology (3)
- APK4123 Human Performance and Energy Supplies (2)
- APK4125C Fitness Assessment and Exercise Prescription (3)
- APK4930 Preparation for Entering and Growing in Profession (2)
- APK4941L Experiential Learning I (4)
- APK4948L Experiential Learning II (4)
- IHS 4504 Research Methods in Health Care (3)
- PHT3176C Movement Science I (8)
- PHT3177C Movement Science II (5)

* see recommendation for program changes page 27

During the program evaluation period the College of Health Professions faculty revised the college "core" curriculum requirement for all CHP students. Based on this revision the faculty in the Department of Physical Therapy and Human Performance eliminated the graduation requirement for Human Performance students to complete IHS 3201 Shaping Healthcare in the 21st Century and IHS 4938 Senior Seminar. In addition to eliminating these requirements the faculty changed the name of IHS 3203 Management and Leadership in Health Care Organizations course to Athletic Health Care

Management, added a Care and Prevention of HP injuries course and increased the credit hours in Experiential Learning II to four hours, making it also a senior capstone course. The final change the PT/HP faculty made was to add one hour to the previously one hour Preparation for Entering and Growing in Profession course. All of the above changes were approved by the Dean, University Curriculum Team, Academic Affairs, and the State of Florida and will be implemented beginning fall 2010.

4. University Requirements (3 hrs)

- IDS 3920 University Colloquium (3)

5. Additional Electives (variable)

D. Human Performance Program Course Descriptions

APK 3004C - FND H/R Physical Fitness - 3 credit(s)

This course explores health-related physical fitness theories. It provides the student with a foundation to understand the relationship between health-related physical fitness and personal wellness throughout the lifespan.

APK 3312 – Pharmacology & Ergogenic Aids Sport & HP - 2 credit(s)

Examines the function of pharmacological and ergogenic aids as they relate to exercise and injury management. Integrates the knowledge, skill and professional responsibility within pharmacologic and ergogenic aid application.

APK 3XXX – Care and Prevention of HP Injuries – 3 credit(s)

Students study about the Prevention, Recognition, Treatment and Rehabilitation of Human Performance Injuries. Students learn acute care injuries; learn safety precautions and emergency procedures.

APK 3931 - Selected Topics: Human Perform - 1 to 4 credit(s)

Current concepts, selected problems or issues pertaining to Human Performance are examined by program majors. Topics vary according to recent developments in Human Performance.

APK 4XXX – Athletic Health Care Management – 3 credit(s). The course covers principles of organization and administration for athletic health care facilities. Emphasis will be placed on facility organization and design, budgeting, legal liability, health insurance reimbursement, human resources, and issues related to health care

APK 4110L - Applied Exercise Physiology - 3 credit(s)

Students explore in detail the acute and chronic responses to exercise. This course will explore metabolic, neuromuscular, respiratory and cardiovascular physiological concepts and principles with practical application to human performance and sport.

Prerequisite(s): PHT 3177C

APK 4112 - Sport & Human Exercise Psychology - 3 credit(s)

Students explore in detail concepts related to the psychological aspects surrounding sport and human performance. This course explores psychological concepts and principles from an applied perspective to human performance and sport. Additional Information: Students will have the opportunity to practice skills related to psychological constructs of physical fitness program design and human performance.

Prerequisite(s): PSY 2012

APK 4113C - Adv Methods of Strength & Conditioning - 3 credit(s)

Examination of advanced methods on developing muscular fitness for health and skill-related fitness. Course also explores advanced physical fitness conditioning techniques for apparently health populations and special populations. Students may enroll in this course with permission of instructor only.

Prerequisite(s): APK 4125C or APK 3006C

APK 4120C - Clinical Exercise Physiology - 3 credit(s)

Studies exercise physiology in populations that have been diagnosed with cardiac, pulmonary, metabolic and musculoskeletal diseases.

Prerequisite(s): PET 4380C or APK 4110L

APK 4122L - Environmental Exercise Phys - 3 credit(s)

Study of physiological responses in human performance to environmental stressors.

Prerequisite(s): APK 4110L

APK 4123 - Human Performance and Energy Supplies - 2 credit(s)

Examination of relationship between macronutrients, micronutrients, metabolic intermediates to human performance.

APK 4125C - Fitness Assessment and Exercise Prescription - 3 credit(s)

Examination of physical fitness assessment techniques, procedures and protocols, including how to prescribe exercise for apparently healthy populations and special populations.

APK 4930 - PDS II Preparation for Entering and Growing in Profession - 2 credit(s)

Investigates the aspects of entering health and wellness professions including preparation for the national examinations, licensure, negotiating employment, career development and consultation.

APK 4941L - Experiential Learning II - 4 credit(s)

Community-based experience providing an opportunity for the student to apply previously learned concepts and skills. This course is designated as a senior level capstone course.

APK 4948L - Experiential Learning II - 4 credit(s)

Community-based experience providing an opportunity for the student to apply previously learned concepts and skills. Additional Information: Students work under the direct supervision of a community professional. Faculty advisors monitor student progress. Practice settings and course activities vary and are negotiated between the student and the course faculty.

APK 2930 - Selected Topics: Human Perform - 1 to 4 credit(s)

Current concepts, selected problems or issues pertaining to Human Performance are examined by pre-program majors. Topics vary according to recent developments in Human Performance.

IDS 3920 - University Colloquium - 3 credit(s)

The University Colloquium brings together students from all five colleges in a series of interdisciplinary learning experiences. These experiences are designed to address the ecological perspective outcome in relations to other university outcomes and guiding principles. Critical thinking and communication skills will be enhanced through field trips, discussion, projects, and a journal to be maintained by each student. (Advisor approval needed for virtual sections only) (Gordon Rule)

IHS 4504 - Research Methods in HealthCare - 3 credit(s)

Introduces qualitative and quantitative methods of inquiry; critical evaluation of health research literature; ethical integrity issues in research; interdisciplinary proposal preparation for health care scholarship; and application of research findings in health profession's practice.

PET 3930 - Selected Topics: Human Perform - 1 to 4 credit(s)

Current concepts, selected problems or issues pertaining to Human Performance are examined by pre-program majors. The topics vary according to recent developments in Human Performance and/or Athletic Training. Course may be repeated for different topic areas.

PHT 3176C - Movement Science I - 8 credit(s)

Students explore the six foundational sciences in which the practice of physical therapy is grounded. Content focuses on the study of the anatomical, biochemical, behavioral, biomechanical, physiological and developmental aspects of movement science. ~ Admission to the HP/AT Programs, or permission from the Program Director.

PHT 3177C - Movement Science II - 5 credit(s)

Studies and applies anatomical, biochemical, behavioral, biomechanics, physiological and developmental aspects of movement science.

Prerequisite(s): PHT 3176C

V. PROGRAM IMPLEMENTATION

A. Resources

The Human Performance program is supported by the Department of Physical Therapy and Human Performance within the College of Health Professions. The Human Performance laboratory, a 1,700 sq. ft facility, is the main teaching/lab classroom for HP students and is located within the Ben Hill Griffin building. The HP lab has one Parvo Medics metabolic cart, a Cardiac Science stress system, four treadmills, six Monarch ergometers two Olympic lifting platforms, two multi-use squat racks, one Olympic bench, four Olympic bars, one set of dumbbells (5lbs-65lbs) and Olympic weights. The 53,076 square-foot Ben Hill Griffin building includes 5 classrooms, 7 teaching classroom/laboratories and faculty offices. Students in the HP program also take advantage of the Human cadaver lab, and rehabilitation lab both of which are shared with students in the Doctoral of Physical Therapy and Athletic Training programs and are located in the Ben Hill Griffin Building. Classrooms are also available in other nearby academic buildings, AB 3, AB 5, Reed, and Griffin Halls. In addition to regular classrooms/labs, the HP program students utilize the on-campus Alico Arena which houses a fitness center and two gymnasiums. Students in the HP program also use the state of the art FGCU-Lee County Aquatic Center as part of their integrated curriculum and learning laboratories. Construction of Academic Building 8 (AB 8), which will be dedicated to the College of Health Professions, is scheduled for ground breaking Fall of 2010.

B. Benchmarks

Graduates

The number of graduating seniors continues to increase since the program's first graduation in 2005. Students graduating from the Human Performance program will likely continue to increase in the near future as the number of students matriculating into the HP program has sustained an upward trajectory since the program's inception (figure 1). Since the entry of the first HP major into the program in Fall 2003 there has only been one year where an increase in the number of overall students in the program was not evidenced. In fall 2006, there was essentially no growth in the program from the previous year.

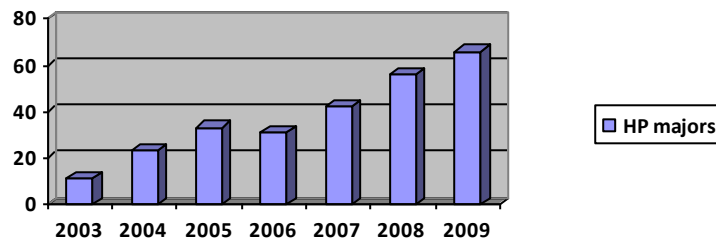


Figure 1 HP Majors

The growth of the Human Performance major and number of graduates has been sustained by the burgeoning numbers of pre-human performance students. The quantity of pre-human performance students compared to the overall student growth at FGCU is depicted below. On a 7 year average from Fall 2003 to Fall 2009, FGCU student growth has averaged approximately 14% each year whereas the pre-HP student and HP major growth averaged 54% and 39% respectively during that same period (figure 2).

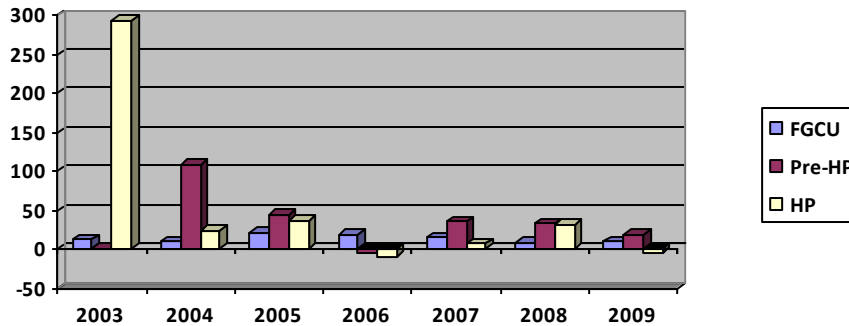


Figure 2 Enrollment Growth Percentages

Current data (Spring 2010) from the Board of Trustees Information System indicates that there are 127 pre-HP students and 66 HP majors. Figure 3 depicts enrollment trends since the inception of the HP major at FGCU.

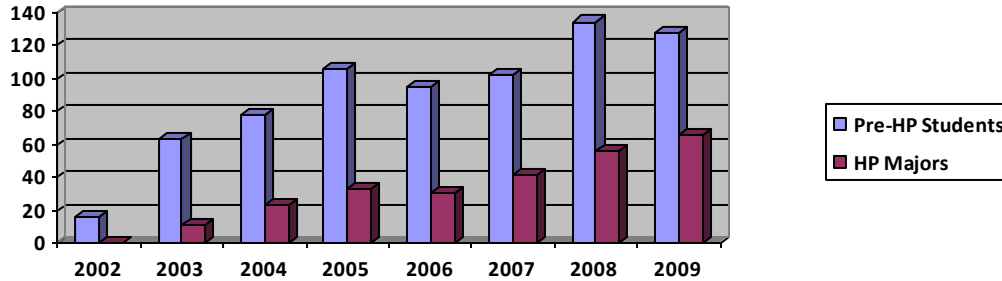


Figure 3 pre-HP and HP Enrollment

Student enrollment in all of the programs in the College of Health Professions has more than doubled since the first pre-HP student enrolled in 2002. The College in Fall 2002 had 543 undergraduate students enrolled and in the fall of 2009 the College enrolled 1,110 undergraduates. This enrollment growth was also evidenced during the 8 years following the BOT approval of the HP program. In 2002, the students enrolled in the HP program represented only 3% of the total enrollment headcount in the College. However, in the fall of 2009 the combined undergraduate programs (i.e. students enrolled at FGCU as Pre-HP, Pre-AT, HP majors and AT majors) accounted for 31% of the College's enrollment and the stand alone Human Performance major combined with the Pre-HP students accounted for 17% of the student enrollment in the College.

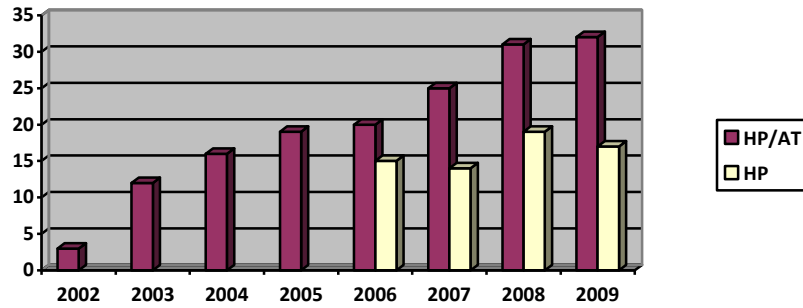


Figure 4 Percentage of Total Undergraduate CHP enrollment

The Human Performance Program Proposal approved by the FGCU Board of Trustees in June, 2002 projected that the HP program would be at an enrollment of 64 students in year number five of the program. However, it took until year number six to meet that projection when the number of students enrolled in the Human Performance program was 76 (i.e. the original HP program, inclusive of both HP and AT). In year number seven the combined programs had 92 enrolled students and the HP major alone had a headcount of 66 students (figure 5).

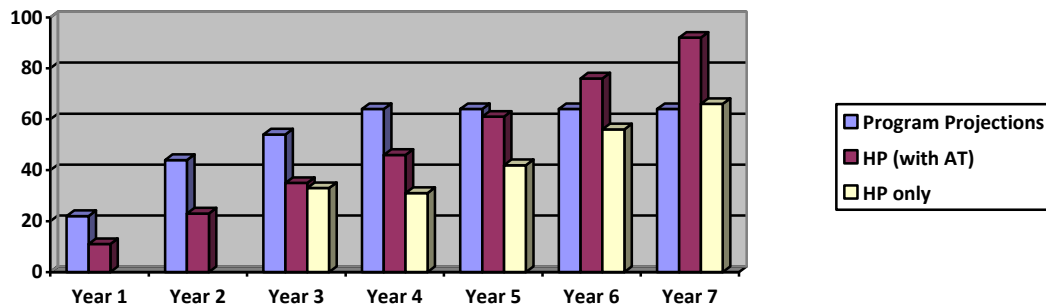


Figure 5

Of the 57 graduates of the HP program, post graduation data is known on 60% of them. Graduates of the HP program are currently employed in the areas of hospital based wellness/fitness centers, cardiac rehabilitation, secondary and post-secondary education sites, professional sports organization, for profit fitness centers and as entrepreneurs. Other HP graduates are in graduate or post-baccalaureate programs. Alumni of the FGCU HP program have now also begun entry level careers as health care providers (i.e. Physical Therapists, Nurses). Forty-one percent of the HP graduates have either entered Physical Therapy programs or are now practicing Physical Therapists. Another 21% of the group went to graduate school and 38% of the graduates are professionals in the Human Performance field. With only 57 graduates, the data is limited on employment and graduate school.

C. HP Students: Background, Description, Profiles

Year	Entering Number of students	Last 30 hours grade point average	Program gpa upon graduation	Graduating overall grade point average	Graduates receiving Honor's
2003	5	n/a	n/a	3.40	1
2004	6	n/a	n/a	3.42	1
2005	16	n/a	n/a	3.26	2
2006	13	n/a	3.33	3.27	3
2007	26	3.55	3.60	3.51	11
2008	31	3.45	3.42*	3.42*	
2009	32	3.39			

* current grade point averages as of 1/31/10

D. Desired Student Learning Outcomes

“Florida Gulf Coast University is committed to the following learning goals and educational outcomes, believing they provide a foundation for lifelong learning and effective citizenship. The specific outcomes involving knowledge, understanding, analysis, evaluation and collaboration provide the basis on which the University and the learner, sharing responsibility, can measure progress toward reaching these goals.”

University Undergraduate Learning Outcomes

Goal 1: Aesthetic sensibility. Know and understand the variety of aesthetic frameworks that have shaped, and continue to shape, human creative arts. Analyze and evaluate the aesthetic principles at work in literary and artistic composition, intellectual systems, and disciplinary and professional practices. Collaborate with others in projects involving aesthetic awareness, participation and/or analysis.

Goal 2: Culturally diverse perspective. Know and understand the diversity of the local and global communities, including cultural, social, political and economic differences. Analyze, evaluate, and assess the impact of differences in ethnicity, gender, socioeconomic status, native language, sexual orientation and intellectual/disciplinary approaches. Participate in collaborative projects requiring productive interaction with culturally-diverse people, ideas and values.

Goal 3: Ecological perspective. Know the issues related to economic, social and ecological sustainability. Analyze and evaluate ecological issues locally and globally. Participate in collaborative projects requiring awareness and/or analysis of ecological and environmental issues.

Goal 4: Effective communication. Know the fundamental principles for effective and appropriate communication, including reading, writing, speaking and listening skills. Organize thoughts and compose ideas for a variety of audiences, using a range of communication tools and techniques. Participate in collaborative projects requiring effective communications among team members.

Goal 5: Ethical responsibility. Know and understand the key ethical issues related to a variety of disciplines and professions. Analyze and evaluate key ethical issues in a variety of disciplinary and professional contexts. Participate in collaborative projects requiring ethical analysis and/or decision-making.

Goal 6: Information literacy. Identify and locate multiple sources of information using a variety of methods. Analyze and evaluate information within a variety of disciplinary and professional contexts. Participate in collaborative analysis and/or application of information resources.

Goal 7: Problem-solving abilities. Understand the multidisciplinary and interdisciplinary nature of knowledge. Apply critical, analytical, creative and systems thinking in order to recognize and solve problems. Work individually and collaboratively to recognize and solve problems.

Goal 8: Technological literacy. Develop knowledge of modern technology. Process information through the use of technology. Collaborate with others using technology tools.

Goal 9: Community awareness and involvement. Know and understand the important and complex relationships between individuals and the communities in which they live and work. Analyze, evaluate and assess human needs and practices within the context of community structures and traditions. Participate collaboratively in community service projects.

Program Level Learning Outcomes

“Consistent with its mission and guiding principles, Florida Gulf Coast University is committed to academic excellence and continuous quality improvement, as supported by a sound teaching-learning process. Within this process, students and instructors share responsibility for learning that is a movement from the simple to the complex, the concrete to the abstract, and the dependent to the independent. The Academic Learning Compact (ALC) initiative supports the teaching-learning process by clearly identifying expected core student learning outcomes in the areas of content/discipline knowledge and skills, communications skills, and critical thinking skills; aligning curricula with expectations; and using assessment to guide continuous improvement.”

The following describe the Human Performance program's Learning Outcomes as identified by the ALC initiative:

Content/Discipline Knowledge and Skills

Graduates will be able to:

- Discuss topics in human performance such as wellness and physical fitness concepts, including health-related and skill-related components of fitness, fitness assessment and basic exercise program design to be used in areas such as exercise physiology, corporate wellness, strength and conditioning and personal training
- Practice leadership behaviors consistent with professional expectations in the field of human performance
- Evaluate physical fitness and apply appropriate exercise training principles in the design of fitness programs for health and performance
- Read, synthesize and interpret human performance literature.

Communication Skills

Graduates will be able to:

- Employ the conventions of standard written English;
- Select a topic, and develop it for a specific audience and purpose, with respect for diverse perspectives;
- Select, organize, and relate ideas and information with coherence, clarity, and unity
- Demonstrate effective and appropriate communication skills in a health science field.

Critical Thinking Skills

Graduates will be able to:

- Select and organize information;
- Identify assumptions and underlying relationships;
- Synthesize information, and draw reasoned inferences;
- Formulate an appropriate problem solving strategy;
- Evaluate the feasibility of the strategy;
- Assess needs, develop priorities, and implement solutions to problems using discipline specific and interdisciplinary approaches in health sciences.

As stated earlier the Department of Physical Therapy and Human Performance has graduated 57 students with a major in Human Performance. The 57 graduates of the HP program have all been successful in completing program level learning outcomes (see appendix A).

E. FacultyDepartment of Physical Therapy and Human Performance
Faculty Summary

Initials and Surname of Faculty Member	Current Rank or Title	Check One		Date of Appointment	Degree	License/Cert	Percentage of Time Assigned to HP Program
		Part-time/	Full-time Adjunct				
S Bevins	Chair, Associate Professor	X		7/1/96	PhD, PT	PT	4%
D Hunt	HP Program Director, Assistant Professor	X		8/7/02	EdD, CSCS	CSCS	97%
B McAloose	HP Clinical Coordinator, Instructor	X		8/7/05	MA		97%
T Burkett	Instructor II	X		N/A	MS		n/a
D Czech	Adjunct		X	Fall 03	PhD		n/a
A Spencer	Adjunct		X	Fall 09	MSPT, BS	PT	n/a
T Bevins	Assistant Professor	X		8/1/96	MS, PT	PT	11%
S Black	Assistant Professor	X		1/4/2010	DSc, PT, ATC, CSCS	PT, AT, CSCS	1%
J Craddock	AT Program Director, Instructor II	X		8/7/04	EdD, ATC, CSCS	AT, CSCS	4%
S Felton	AT Clinical Coordinator, Assistant Professor	X		7/8/07	Med, ATC, LAT	AT	2%
R López-Rosado	Instructor	X		8/7/04	MSc, DPT	PT	11%
K Swanick	Instructor II	X		8/7/04	DPT, MS, OCIS	PT, OCS	0%
A van Duijn	Assistant Professor	X		1/1/07	EdD, PT, OCS	PT, OCS	0%
J van Duijn	ACCE, Assistant Professor	X		8/7/07	DPT, OCS	PT, OCS	1%
M Venglar	Assistant Professor	X		8/7/08	DSc, MSPT, NCS	PT, NCS	1%
E Williamson	Assistant Professor	X		4/1/96	MS, PT	PT	2%

F. Library Resources

FGCU’s library services occupy over 135,000 square feet, in a state-of-the-art library building located on-campus and is a focal point for student and faculty scholarship. The library boasts 411,400 titles, 45,000 journals, 39,000 cataloged e-books; over 300 data bases, and 135 public computers. Remote access is available 24/7 and the library staff includes 12 professional librarians and 17 support staff. Florida Gulf Coast University completed an expansion of its multi-million dollar technology library that more than doubled its capacity in 2006. The University library is proximate to all academic buildings on campus.

Many materials from the ten state universities may be accessed electronically through the Florida Gulf Coast University (FGCU) library. The library also subscribes to on-line periodical search and delivery services, as well as periodicals in print and microform. The online materials are available to students and faculty through the Internet account. Available databases specific to Human Performance include *CINAHL*; *MedLine*; *PubMed*; *PsycInfo*; *ProQuest Health & Medical Complete*; *DynaMed*; the *PEDRo* database; *Health & Wellness Resource Center*; *REHABDATA*; *ERIC*; *Education Full-text*; *ScienceDirect*; *CSA Biological Sciences, Biotechnology and Bioengineering Abstracts*, and *Physical Education Index*. There are over 3200 online journals (ejournals) specifically supporting human performance, athletic training and physical therapy, and more than 30 such periodicals in print or microform.

The monographic budget for books is not categorized by subject within the College of Health Professions allocation, due to the crossover of materials used by the allied health fields (e.g. physical therapy and occupational therapy) nursing, and health science. One-time and monographic expenditures for all of the College of Health Professions were:

Year	Expenditures
2003-2004	\$47,727
2004-2005	\$37,003
2005-2006	\$42,384
2006-2007	\$26,749
2007-2008	\$26,133
2008-2009	\$21,990

There is a “new books search” feature on the Library website that students and faculty may view. Also, as new materials of interest or relevance to specific Human Performance faculty and courses arrive, the librarian notifies individual faculty.

The circulating collection is open for student borrowing as follows: Books, audiocassettes and CDs for 28 day loan period; DVD’s and videocassettes for 14 days; analog reserve materials from 1-7 days. Electronic reserve materials are available 24/7 via the Web to students with valid University I.D. cards. The Library facility is open 92.5 hours per week, including weekends, and weekday and evening hours. There have been no requests by Human Performance students for longer library hours, as many materials are available online 24/7.

There are 118 public computer workstations and 2 multi-media development rooms in the new Library Annex. Copiers and printers are located on each floor of the Library. The campus has a wireless network and wireless cards for laptops are available for 2-hour in-Library use. There are many study tables with network cabling for student use throughout the Library.

The Library has a state-of-the art library catalog and other electronic services and resources. Students may freely access and search the University's Library catalog 24/7 via the Web, as well as the library catalogs of all other State Universities in Florida. The Library uses a highly efficient interlibrary loan system for students and faculty, procuring books, articles and documents from libraries worldwide and free of charge to all students, if materials are not owned by the FGCU Library. In addition distance learning students have document delivery services for books and photocopies from the FGCU Library collection.

Library Reference services are provided daily, evenings and on weekends via face-to-face consultation, email Reference question and answers, and Web Reference question forms. Online chat reference is available approximately 20 hours per week. The Health and Social Work librarian provides reference service Monday evenings and other hours during the week. She is available for Reference staff to refer questions if needed.

The Health and Social Work Librarian, who holds the M.A and the M.S.P.H., provides collection development, reference and research consultation services, and information literacy classes to the Human Performance program. The librarian provides lectures on bibliographic research to the undergraduate research methods classes, and orientation to Human Performance students. The librarian provides in-depth, hour-long research consultations with Human Performance students and faculty upon request, including in the evenings and via telephone.

The Health and Social Work Librarian maintains an updated Web-based Research Guide for human performance, which is available for faculty to link directly from Human Performance courses in the course management system, Angel. The Research Guide is on the library website and freely available to all persons via the Worldwide Web.

<http://fgcu.libguides.com/humanperformance>)

The librarian provides reference services to alumni and members of community agencies upon request. The Health and Social Work Librarian encourages, receives and orders faculty requests for books and media. Requests for new journals are added to a Library wish list, but with online availability of approximately 40,000 unique electronic journal titles, there has not been a journal request denied in recent years. Core library materials for Human Performance are identified through two international book vendors and publication catalogs from publishers and organizations in the discipline.

G. Other Resources

Instructional Technology resources begin with a network backbone that connects all campus buildings at gigabyte speeds with 100 megabit connectivity to the desktop. Wireless computing is nearly ubiquitous on campus. Courses are supported through the ANGEL Learning Management system and every classroom is furnished with an electronic podium. Over 70 physical and virtual servers provide for the delivery of a broad range of applications. Finally, university business operations are facilitated through the university's Banner ERP software. In short, the university has an IT platform that is flexible and well-positioned to sustain further growth.

According to the **Internal Scan** prepared by The Planning and Budget Council with Assistance from the Office of Planning and Institutional Performance and published in December, 2009 in conjunction with Strategic Plan 2010-2015 "student life on campus is vigorous and constantly growing." Approximately 3,000 students are resident on campus. The Division of Student Affairs provides students with health services, counseling, recreational opportunities, advising, housing, and career development to meet student needs. A well-coordinated student judicial affairs process, and student leadership program help round out student development.

H. Student Performance

ASSESSMENT OF LEARNING OUTCOMES FOR PROGRAM IMPROVEMENT

Assessment of Content/Discipline Knowledge and Skills

Content/discipline knowledge and skills are assessed at the college and department levels through essays, exams, and other projects completed in the following courses:

- APK3004C Foundations of Health-Related Physical Fitness (design a personal Individualized Fitness Plan)
- APK4125C Fitness Assessment and Exercise Prescription and APK 4120C Clinical Exercise Physiology (design, interpret and discuss two Comprehensive Fitness Evaluations; and distinguish between an apparently healthy population fitness plan and a special population fitness/wellness plan)
- APK4113C Advanced Methods of Strength and Conditioning (describe 1RM testing protocols; predict maximum strength levels of individuals; discuss a periodization program; differentiate the periodization paradigm to other training models; design muscular fitness program)
- APK4941L Experiential Learning I (interpret different training programs for diverse populations)
- APK4948L Experiential Learning II (evaluate 11 characteristics of human performance professionals utilizing the Human Performance Assessment Tool – Visual Analog Scale [HPAT])
- IHS 4504 Introduction to Research (literature review on topic specific to human performance and research article critique)

Assessment of Communication Skills

Communication skills are assessed as part of the General Education Program (GEP) through papers, exams, and projects completed in ENC 1101 Composition I, ENC 1102 Composition II, and HUM 2510 Understanding the Visual and Performing Arts. Communications skills are also assessed in the capstone course.

Assessment of Critical Thinking Skills

Critical thinking skills are assessed as part of the General Education Program through papers, exams and projects completed in ENC 1101 Composition I, ENC 1102 Composition II, and HUM 2510 Understanding the Visual and Performing Arts. Critical thinking skills are also assessed in the capstone course.

Each student entering the HP program completed the GEP prior to beginning full-time study in the HP major. In addition, each student who completed the degree requirements for HP completed all of the requirements of the HP capstone course. Currently, the HP program has had 100% of its graduates successfully complete every one of the Assessment of Learning Outcomes stated and obtained a Bachelor of Science degree in Human Performance.

Additional Graduation Requirements

- Students must satisfactorily complete a minimum of 120 credit hours.
- At least 48 of the 120 hours must be in the upper division (3000 and higher).
- At least 30 of the last 60 hours must be earned at FGCU.
- A cumulative GPA of 2.0 is required for all coursework attempted at FGCU.
- A minimum grade of C is required for all Human Performance major courses.
- Satisfy CLAST, Gordon Rule writing and computation, and foreign language entrance requirements.
- Satisfy Service Learning requirement. See <http://www.fgcu.edu/connect/>
- Perform at Entry Level in all Behavioral Criteria of the Professional Behaviors Plan.
- Meet all FGCU requirements for graduation.
- Complete three applied learning experiences (events) per semester enrolled in the Human Performance program.
- Adhere to requirements as stated in the Human Performance Student Guidebook.

Progression Requirements

- Students must follow a Program of Study approved by the student's faculty advisor.
- Students must receive a grade of "C" ("S" if applicable) or better on all courses within the program curriculum.
- A student must perform at the appropriate level of generic abilities and behavioral criteria as outlined in the Professional Behaviors Plan (appendix B)

VI. STRENGTHS, WEAKNESSES, OPPORTUNITIES, AND THREATS (SWOT) ANALYSIS

The SWOT analysis is widely used in higher education and provides a sound infrastructure for strategic planning. The analysis identifies and discusses implications of program *strengths* (S) and *weaknesses* (W), both of which are internally derived and therefore within the Program's control, as well as *opportunities* (O) and *threats* (T), which are functions of external environment and therefore, to varying extents, outside of the Program's control.

A. *Strengths*

- According to the **Internal Scan** prepared by The Planning and Budget Council with Assistance from the Office of Planning and Institutional Performance and published in December, 2009 in conjunction with Strategic Plan 2010-2015 faculty, staff and students are "at the heart of our success." "FGCU's culture promotes faculty and staff retention and consequently results in a knowledgeable and experienced cadre of professionals." (page 2)
- The university's state of the art physical plant. The youngest in Florida's State University System
- Active student-centered learning curriculum
- Affiliation and formal recognition by the National Strength and Conditioning Association (i.e. Education Recognition Program)
- Community partnerships

B. *Weaknesses*

- An increase in average course section size, increasing ratios of undergraduate HP majors to full-time faculty/staff, insufficient depth in some personnel/functional categories, and stress on the system; page nine **Internal Scan** Strategic Plan 2010-2015
- According to the **Internal Scan** prepared by The Planning and Budget Council with Assistance from the Office of Planning and Institutional Performance and published in December, 2009 in conjunction with Strategic Plan 2010-2015, new facilities are in constant need.
- Lowered student entrance requirements. Program pre-requisites changes that were mandated to FGCU will not be fully realized until the graduating class of 2011.

C. *Opportunities*

- New Leadership –The University has a relatively new President, Dr. Wilson G. Bradshaw and Vice President of Academic Affairs and Provost, Dr. Ronald B. Toll. During the fiscal 2010-2011 year the College of Health Professions will welcome a new Dean as well.
- New facilities – some of the past challenges in finding space for both teaching and research will be alleviated when Academic Building 8, a 58,000 sq ft building with state of the art facilities opens in early 2012.

- Location – Being located in southwest Florida is an opportunity that is available everyday and is a positive attraction for HP services and practitioners
- A general weakness is related to availability of resources (page 11 Internal Scan; Strategic Plan 2010-2015). There are a number of developments that can potentially lead to increased resources in the coming years. These include the recent introduction of a tuition differential and a technology fee that have the potential to generate millions of dollars in revenue, plus the potential use of program fees.
- Faculty/Staff – As pointed out in the Strategic Plan 2005-2010 in goal four, growth in the number of students in any program should allow for the recruitment of “diverse faculty and staff who possess and exhibit: exceptional skills; teaching excellence; scholarly productivity and service that reflect knowledge of subject matter and pedagogy; student focus; sense of community; and a commitment to building a University for the future.” To complement faculty “the recruitment and retention of a diverse, educated staff that provides high quality support and service to the University and its constituents” is also desirable. In addition, the increasing professional development opportunities for faculty and staff should remain a priority.
- The demand for higher education continues to increase as students find fewer employment possibilities. Colleges and Universities are expanding their degree program offerings to accommodate this increased need especially in the area of on-line course offerings. The Human Performance program utilizes the distance learning format in all of its classes. Currently, eight courses in the major are offered 100% by means of a distance learning platform, all other HP core courses are “hybrid” courses.
- Major League Baseball (MLB) – Florida continues to be the home of spring training for many major league baseball teams. With the addition of the new Boston Red Sox spring training and minor league training site (three miles from campus) it will afford a further strengthening of the current affiliation agreement and utilization of HP students and graduates in MLB
- Affiliations with other colleges – program affiliations currently exist with Ava Maria University and Webber International University. Both institutions have accepted HP students in the past and have now established strength and conditioning programs for their intercollegiate athletes. Webber International has also utilized an HP graduate to lead their strength and conditioning programs in intercollegiate athletics
- Increase community partnerships
 - Increase in enrollment will dictate the development of additional community sites
- Possibilities of research and student led research projects

D. Threats

- State budget cuts have resulted in a lack of resource growth and resource replacements. This affects the sustainability of the university’s growth curve.

- The university according to the **Internal Scan** published as part of the Strategic Plan for 2010-2015 points out that FGCU has been successful at increasing the number of faculty and staff hired virtually every year of its existence and has recently avoided layoffs or furloughs, despite state budget cuts, however, it also states that continued faculty and staff growth at a rate commensurate with the projected growth of the student body may be adversely impacted by reductions in state appropriations.
- Curriculum Gap
 - A potential need exists to develop a more congruent curriculum and experiential learning program better identifying affiliations with the NSCA ERP designation and the ACSM knowledge, skills and abilities (KSAs) found in appendices D and E. Department faculty having reviewed both the ERP guidelines and KSAs concluded that the strengthening of the curriculum to underscore a stronger endorsement to both agencies guidelines might be needed in the future.
- Overall growth – the continued rapid growth without adequate increases in resources and infrastructure
- Both the NSCA and ACSM through their Education Recognition Program (ERP) and published Knowledge, Skills and Abilities (KSAs) respectively promote the practical aspect and pragmatic experiences related to Human Performance. The NSCA notes that the overall efficacy of a curriculum should include the provisions of practical experiences. In addition, the ACSM recognizes in the KSAs the value of developing 29 different skill sets for practitioners (Appendix E). The PT/HP Department and Program Mission articulate the need to develop the undergraduate student’s skill level in the area of Human Performance. However, faculty in the department began discussions in the fall of 2008 about the potential drift away from the “applied scientific basis of practice” and community involvement potentially caused by HP enrollment growth and program resources.
- Lack of program identity
 - As student growth continues beyond initial program design, the need could potentially exist to better identify the program beyond the notion that the HP program is only a “pre-PT” program.

VIII. RECOMMENDATIONS FOR PROGRAM CHANGES

A. How these program review results may be used

The program faculty believe that the review of the Human Performance program identifies a potential “identity crisis” and curriculum → career gap. To diminish the “identity crisis” and better prepare students so that they can continue to obtain jobs and have a better career path in Human Performance the program faculty believe that the program should be significantly strengthen utilizing both the accreditation processes of the American College of Sports Medicine and the National Strength and Conditioning Association ERP guidelines.

B. Changes resulting from earlier reviews

During previous department reviews and student exit interviews discussions took place about program curriculum. These discussions led to courses being added/deleted, altered and rearranged to improve curriculum offerings and enhance the overall program. In Fall 2009, additional curricular changes and program pre-req changes were identified by faculty review (see required courses in the major, page). It is anticipated that the requested changes for both the HP plan of study and program pre-reqs will be adopted later in AY2009-2010 and go into effect for the class of 2012.

Appendix A

Appendix A: B.S. in Human Performance Learning Outcomes and Planned Assessment

Program Statement of Purpose: The purpose of the program is to prepare students for entry level careers that deal with the enhancement of individual health and/or performance capabilities. A secondary purpose for the graduate of the HP program who receives a Bachelor of Science degree in Human Performance is to provide an appropriate background to pursue graduate studies in exercise science or other health-related disciplines.

Student Learning Outcomes—Graduates will:	B. S. In Human Performance Learning Outcomes— Graduates will be able to	Planned Assessment
1. Discuss topics in human performance.	<ul style="list-style-type: none"> ▪ Describe wellness and physical fitness concepts, including health-related and skill-related components of fitness, fitness assessment and exercise program design. ▪ Apply evidence-based knowledge in the areas of exercise physiology, corporate wellness, cardiac rehabilitation, strength and conditioning and personal training. 	<ul style="list-style-type: none"> • Course requirements in APK3004C foundations of Health Related Physical Fitness and APK 4125C Fitness Assessment and Exercise Prescription. • Course assignments in APK4110L Applied Exercise Physiology, APK4120C Clinical Exercise Physiology and APK4113C Advanced Methods of Strength and Conditioning.
2. Be prepared for leadership roles in professional and occupational areas in communities in which they live and work.	<ul style="list-style-type: none"> ▪ Practice leadership behaviors consistent with professional expectations in the field of human performance. ▪ Model professional behaviors that are consistent with professional excellence and the expectations of the profession and the consumer. 	<ul style="list-style-type: none"> • Course requirements in APK4941L Experiential Learning I and APK4948L Experiential Learning II (see appendix D). • Course assignments in IHS 3203 Management and Leadership in Health Care Organizations and APK4930 PDS II Preparation for Entering and Growing in the Profession.

<p>3. Evaluate physical fitness (i.e. health-related and sport specific) and apply appropriate exercise training principles in the design of fitness programs for health and performance.</p>	<ul style="list-style-type: none"> ▪ Practice utilizing technical skills consistent with current practice in the profession. ▪ Employ appropriate strategies to develop evidence-based exercise prescriptions and program designs. ▪ Apply quantitative and qualitative methods suitable to the varied contexts within which graduates will ultimately be employed to contribute to the transformation and continuous improvement of wellness, strength and conditioning, cardiac rehab and other human performance venues. ▪ 	<ul style="list-style-type: none"> • Course assignments in APK4125C Fitness Assessment and Exercise Prescription and APK 4113C Advanced Methods of Strength and Conditioning. • Course requirement APK4120C Clinical Exercise Physiology and APK 4110L Applied Exercise Physiology. • Course requirements IHS 4504 Research Methods and Application to Health Care Systems.
<p>4. Read, synthesize and interpret human performance literature.</p>	<ul style="list-style-type: none"> ▪ Select and organize relevant HP information ▪ Draw reasoned inferences from synthesized information. ▪ Formulate and explain appropriate problem solving strategies. ▪ Evaluate the feasibility of the strategies. 	<ul style="list-style-type: none"> • Course assignments IHS 4504 Research Methods and Application to Health Care Systems, APK4112L Environmental Exercise Physiology and APK4120C Clinical Exercise Physiology. • Course requirements in APK4941L Experiential Learning I and APK4948L Experiential Learning II (see appendix D).

<p>5. Demonstrate excellence in critical thinking, problem solving, analysis and strategic planning.</p>	<ul style="list-style-type: none"> ▪ Recognize and analyze human performance challenges. ▪ Describe current trends in human performance policies, laws, exercise programs, planning, and regulation. 	<ul style="list-style-type: none"> • Course requirements in APK4941L Experiential Learning I and APK4948L Experiential Learning II (see appendix D). • Course assignments in APK4110L Applied Exercise Physiology, APK 4123 Human Performance and Energy Supplies, APK 4125C Fitness Assessment and Exercise Prescription and APK 4113C Advanced Methods of Strength and Conditioning.
<p>6. Demonstrate effective use of a variety of communication skills and modalities.</p>	<ul style="list-style-type: none"> ▪ Examine current trends and successful solutions that have been implemented to address pressing human performance policy, planning, management and leadership issues. ▪ Articulate these trends and solutions to the general public, government officials, volunteers, non-profit managers, and human performance professionals. 	<ul style="list-style-type: none"> • Course requirements in APK 3004C foundations of Health Related Physical Fitness, APK 4112 Sport and Human Performance Psychology. • Course requirements in IHS 4504 Research Methods and Application to Health Care Systems, APK4125C Fitness Assessment and Exercise Prescription, APK4120C Clinical Exercise Physiology APK4941L Experiential Learning I and APK4948L Experiential Learning II.

Appendix B

PROFESSIONAL BEHAVIORS PLAN
DEPARTMENT OF PHYSICAL THERAPY AND HUMAN PERFORMANCE
Human Performance Program
FLORIDA GULF COAST UNIVERSITY

Generic Ability	Beginning Level Behavioral Criteria*	Developing Level Behavioral Criteria**	Entry Level Behavioral Criteria***
<p>1. Commitment to Learning The ability to self-assess, self-correct, and self-direct; to identify needs and sources of learning; and to continually seek new knowledge and understanding.</p>	<ul style="list-style-type: none"> • Identifies problems • Formulates appropriate questions • Identifies and locates appropriate resources • Demonstrates a positive attitude (motivation) toward learning • Offers own thoughts and ideas • Identifies need for further information 	<ul style="list-style-type: none"> • Prioritizes information needs • Analyzes and subdivides large questions into components • Seeks out professional literature • Sets personal and professional goals • Identifies own learning needs based on previous experiences • Plans and presents an in-service, or research or case studies • Welcomes and/or seeks new learning opportunities 	<ul style="list-style-type: none"> • Applies new information and re-evaluates performance • Accepts that there may be more than one answer to a problem • Recognizes the need to and understands limit of application to professional practice • Researches and studies areas where knowledge base is lacking
<p>Student Level (circle or highlight appropriate level)</p> <p>Emerging Beginning Developing Entry</p>		<p>Comments</p>	

Generic Ability	Beginning Level Behavioral Criteria*	Developing Level Behavioral Criteria**	Entry Level Behavioral Criteria***
<p>2. Interpersonal Skills The ability to interact effectively with clients, patients, families, colleagues, other health care professionals, and the community and to deal effectively with cultural and ethnic diversity issues.</p>	<ul style="list-style-type: none"> • maintains professional demeanor in all clinical, community and educational interactions • Demonstrates interest in clients, patients and others as individuals • Respects cultural and personal differences of others; is non-judgmental about clients/others/lifestyles • Communicates with others in a respectful, confident manner • Respects personal space of patients and others • Maintains confidentiality in all clinical/<i>colleague</i> interactions • Demonstrates acceptance of limited knowledge and experience 	<ul style="list-style-type: none"> • Recognizes impact of non-verbal communication and modifies accordingly • Assumes responsibility for own actions • Motivates others to achieve • Establishes trust • Seeks to gain knowledge and input from others • Respects role of support staff 	<ul style="list-style-type: none"> • Listens to patient /<i>others</i> but reflects back to original concern • Works effectively with challenging patients/<i>colleagues</i> • Responds effectively to unexpected experiences • Talks about difficult issues with sensitivity and objectivity • Delegates to others as needed • Approaches others to discuss differences in opinion • Accommodates differences in learning styles
<p>Student Level (circle appropriate level)</p> <p>Emerging Beginning Developing Entry</p>		<p>Comments</p>	

Generic Ability	Beginning Level Behavioral Criteria*	Developing Level Behavioral Criteria**	Entry Level Behavioral Criteria***
<p>3. Communication Skills The ability to communicate effectively (i.e., speaking, body language, reading, writing, listening) for varied audiences and purposes.</p>	<ul style="list-style-type: none"> • Demonstrates understanding of basic English (verbal and written): uses correct grammar, accurate spelling and expression • Writes legibly • Recognizes impact of non-verbal communications: maintains eye contact, listens actively • Maintains eye contact 	<ul style="list-style-type: none"> • Utilizes non-verbal communications to augment verbal message • Restates, reflects and clarifies message • Collects necessary information from the patient/<i>peer/faculty</i> interview/ 	<ul style="list-style-type: none"> • Modifies communication (verbal and written) to meet the needs of different audiences • Presents verbal or written message with logical organization and sequencing • Maintains open and constructive communication • Utilizes communication technology effectively • Dictates clearly and concisely
<p>Student Level (circle appropriate level) Emerging Beginning Developing Entry</p>		<p>Comments</p>	

Generic Ability	Beginning Level Behavioral Criteria*	Developing Level Behavioral Criteria**	Entry Level Behavioral Criteria***
<p>4. Effective Use of Time and Resources The ability to obtain the maximum benefit from a minimum investment of time and resources.</p>	<ul style="list-style-type: none"> • Focuses on tasks at hand without dwelling on past mistakes • Recognizes own resource limitations • Uses existing resources effectively • Uses unscheduled time effectively • Completes assignments in timely fashion 	<ul style="list-style-type: none"> • Sets up own schedule • Coordinates schedule with others • Demonstrates flexibility • Plans ahead 	<ul style="list-style-type: none"> • Sets priorities and recognizes as needed • Considers client’s goals in context of client, site, and third party resources • has ability to say “No” • Performs multiple tasks simultaneously and delegates when appropriate • Uses schedule time with each patient colleague efficiently
<p>Student Level (circle appropriate level)</p> <p>Emerging Beginning Developing Entry</p>		<p>Comments</p>	

Generic Ability	Beginning Level Behavioral Criteria*	Developing Level Behavioral Criteria**	Entry Level Behavioral Criteria***
<p>5. Use of Constructive Feedback The ability to identify sources of and seek out feedback and to effectively use and provide feedback for improving personal interaction.</p>	<ul style="list-style-type: none"> • Demonstrates active listening skills • Actively seeks feedback and help • Demonstrates a positive attitude toward feedback • Critiques own performance • Maintains two-way communication 	<ul style="list-style-type: none"> • Assesses own performance accurately • Utilizes feedback when establishing pre-professional goals • Provides constructive and timely feedback when establishing pre-professional goals • Develops plan of action in response to feedback 	<ul style="list-style-type: none"> • Seeks feedback from clients • Modifies feedback given to clients according to their learning styles • Reconciles differences with sensitivity • Considers multiple approaches when responding to feedback
<p>Student Level (circle appropriate level)</p> <p>Emerging Beginning Developing Entry</p>		<p>Comments</p>	

Generic Ability	Beginning Level Behavioral Criteria*	Developing Level Behavioral Criteria**	Entry Level Behavioral Criteria***
<p>6. Problem-Solving The ability to recognize and define problems, analyzes data, develop and implement solutions, and evaluate outcomes.</p>	<ul style="list-style-type: none"> • Recognizes problems • States problems clearly • Describes known solutions to problem • Identifies resources needed to develop solutions • Begins to examine multiple solutions to problems 	<ul style="list-style-type: none"> • Prioritizes problems • Identifies contributors to problem • Considers consequences of possible solutions • Consults with others to clarify problem 	<ul style="list-style-type: none"> • Implements solutions • Reassesses solutions • Evaluates outcomes • Updates solutions to problems based on current research • Accepts responsibility for implementing solutions
<p>Student Level (circle appropriate level)</p> <p>Emerging Beginning Developing Entry</p>		<p>Comments</p>	

Generic Ability	Beginning Level Behavioral Criteria*	Developing Level Behavioral Criteria**	Entry Level Behavioral Criteria***
<p>7. Professionalism The ability to exhibit appropriate professional conduct and to represent the profession effectively.</p>	<ul style="list-style-type: none"> • Abides by ACSM and NSCA Code of Ethics • Demonstrates awareness of state licensure regulations • Abides by facility/<i>university</i> policies and procedures • Projects professional image • Attends professional meeting • Demonstrates honesty, compassion, courage and continuous regard for all 	<ul style="list-style-type: none"> • Identifies positive professional role models • Discusses societal expectations of the profession • Acts on moral commitment • Involves other health care professionals as needed in decision-making • Seeks informed consent from patients/colleagues 	<ul style="list-style-type: none"> • Demonstrates accountability for professional decisions • Treats clients/patients within scope of expertise • Discusses role of human performance in health care, wellness or performance environment's • Keeps client as priority
<p>Student Level (circle appropriate level)</p> <p>Emerging Beginning Developing Entry</p>		<p>Comments</p>	

<p>8. Responsibility The ability to fulfill commitments and to be accountable for actions and outcomes.</p>	<ul style="list-style-type: none"> • Demonstrates dependability • Demonstrates punctuality • Follows through on commitments • Recognizes own limits 	<ul style="list-style-type: none"> • Accepts responsibility for actions and outcomes • Provides safe and secure environment for clients/patients • Offers and accepts help • Completes projects without prompting 	<ul style="list-style-type: none"> • Directs clients/patients to other health care professionals when needed • Delegates as needed • Encourages client/patient accountability
<p>Student Level (circle appropriate level)</p> <p>Emerging Beginning Developing Entry</p>		<p>Comments</p>	

Generic Ability	Beginning Level Behavioral Criteria*	Developing Level Behavioral Criteria**	Entry Level Behavioral Criteria***
<p>9. Critical Thinking The ability to question logically; to identify, generate, and evaluate elements of logical argument; to recognize and differentiate facts, illusions, assumptions, and hidden assumptions; and to distinguish the relevant from the irrelevant.</p>	<ul style="list-style-type: none"> ● Raises relevant questions ● Considers all available information ● States the result of scientific literature ● Recognizes “holes” in knowledge base ● Articulates ideas 	<ul style="list-style-type: none"> ● Feels challenged to examine ideas ● Understands scientific method ● Formulates new ideas ● Seeks alternative method ● Formulates alternative hypotheses ● Critiques hypotheses and ideas 	<ul style="list-style-type: none"> ● Exhibits openness to contradictory ideas ● Assesses issues raised by contradictory ideas ● Justifies solutions selected ● Determines effectiveness of applied solutions
<p>Student Level (circle appropriate level)</p> <p>Emerging Beginning Developing Entry</p>		<p>Comments</p>	

Generic Ability	Beginning Level Behavioral Criteria*	Developing Level Behavioral Criteria**	Entry Level Behavioral Criteria***
<p>10. Stress Management The ability to identify sources of stress and to develop effective coping behaviors.</p>	<ul style="list-style-type: none"> • Recognizes own stressors or problems • Recognizes distress or problems in others • Seeks assistance as needed • Maintains professional demeanor in all situations 	<ul style="list-style-type: none"> • Maintains balance between professional and personal life • Demonstrates effective affective responses in all situations • Accepts constructive feedback • Establishes outlets to cope with stressors 	<ul style="list-style-type: none"> • Prioritizes multiple commitments • Responds calmly to urgent situations • Tolerates inconsistencies in health-care/<i>university</i> environment
<p>Student Level (circle appropriate level)</p> <p>Emerging Beginning Developing Entry</p>		<p>Comments</p>	

Appendix C



**Florida Gulf Coast University
Department of Physical Therapy and Human Performance
Human Performance Program**

**Human Performance Assessment Tool
Experiential Learning Evaluation Form
Completed by site-supervisor**

The Human Performance Assessment Tool (HPAT) evaluates knowledge, skills and attitudes and incorporates multiple sources of information to make decisions about readiness to practice. The system is intended to enable clinical educators and academic faculty to obtain comprehensive perspective of students' progress through the curriculum and competences to practice at entry-level. Please mark the appropriate line either mid-term or final. Students, be sure to give a copy of the mid-term evaluation to the Experiential Learning Education Coordinator. The original is held until after final evaluation. **The Human Performance student must achieve 3 out of 5 on every category by the end of the experience to receive satisfactory grade in Experiential Learning.**

Student Name: _____

Experiential Learning Site: _____

Experiential Learning Site Supervisor: _____

Evaluation Date - Mid semester _____ **Final:** _____

Evaluate the Human Performance student on the following items based on the scale that is provided.

Use the following to rate the Human Performance Student:

N/A – Not Applicable

1 (Extremely Below Expectations) – novice performance

2 (Below Expectations) – Skills observed are much less than standard of practice

3 (Meets Expectations) – Student demonstrates skills consistent with

4 (Above Expectations) – Demonstrates high quality skill of a student

5 (Exceeds Expectations) – Demonstrates skill of entry level professional

PERSONAL QUALITIES:

1. Is punctual and dependable Mid N/A 1 2 3 4 5
Final N/A 1 2 3 4 5

2. Wears attire consistent with expectations of the practice setting Mid N/A 1 2 3 4 5
Final N/A 1 2 3 4 5

3. Accepts Responsibility for own actions	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
4. Receptive to new ideas and suggestions	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
5. Gets along well with clients and staff	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
6. Gets along with staff	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
7. Displays a positive attitude	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
8. Demonstrates initiative	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
9. Demonstrates adaptability	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
10. Completes scheduled assignments in a timely manner	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
11. Overall category evaluation	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5

Additional Comments:

PROFESSIONALISM:

Uses time effectively.	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
Manages conflict in constructive ways	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5

Maintains productive working relationship with site supervisor	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
Accepts responsibility for own actions	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
Accepts constructive criticism in a positive manner	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
Maintains confidentiality	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
Maintains client's privacy and modesty	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
Abides by policies and procedures of site	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
Makes choices after considering the consequences to self and others	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
Schedules clients, equipment, and space efficiently	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
Demonstrates behaviors that contribute to a positive work environment	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
Treats others with positive regard, dignity, respect, and compassion.	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
Completes scheduled assignments in a timely manner	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
Coordinates with other services to facilitate efficient and effective client care.	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
Overall category evaluation	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5

Additional Comments:

COMMUNICATION/DOCUMENTATION:

Communicates, verbally and nonverbally, in a professional and timely manner.

Mid N/A 1 2 3 4 5

Final N/A 1 2 3 4 5

Initiates communication in difficult situations.

Mid N/A 1 2 3 4 5

Final N/A 1 2 3 4 5

Selects the most appropriate person(s) with whom to communicate.

Mid N/A 1 2 3 4 5

Final N/A 1 2 3 4 5

Communicates respect for the roles and contributions of all participants in patient care.

Mid N/A 1 2 3 4 5

Final N/A 1 2 3 4 5

Listens actively and attentively to understand what is being communicated by others.

Mid N/A 1 2 3 4 5

Final N/A 1 2 3 4 5

Demonstrates professionally and technically correct verbal communication.

Mid N/A 1 2 3 4 5

Final N/A 1 2 3 4 5

Interprets and responds to the nonverbal communication of others.

Mid N/A 1 2 3 4 5

Final N/A 1 2 3 4 5

Evaluates effectiveness of his/her own communication and modifies communication accordingly.

Mid N/A 1 2 3 4 5

Final N/A 1 2 3 4 5

Selects relevant information to document the delivery of human performance services.

Mid N/A 1 2 3 4 5
Final N/A 1 2 3 4 5

Documents all aspects of human performance services, including screening, examination, evaluation, plan of care, programming, response to programming, program planning changes, conferences, and communication with others involved in delivery of client care.

Mid N/A 1 2 3 4 5
Final N/A 1 2 3 4 5

Produces documentation that follows guidelines and format required by the practice setting.

Mid N/A 1 2 3 4 5
Final N/A 1 2 3 4 5

Produces documentation that is accurate, concise, timely, and legible

Mid N/A 1 2 3 4 5
Final N/A 1 2 3 4 5

Demonstrates professionally and technically correct written communication skills.

Mid N/A 1 2 3 4 5
Final N/A 1 2 3 4 5

Overall category evaluation

Mid N/A 1 2 3 4 5
Final N/A 1 2 3 4 5

Additional Comments:

CLINICAL ASSESSMENT AND PROGRAMMING SKILLS:

Observes health and safety regulations

Mid N/A 1 2 3 4 5
Final N/A 1 2 3 4 5

Maintains safe working environment

Mid N/A 1 2 3 4 5
Final N/A 1 2 3 4 5

Knowledgeable of emergency procedures

Mid N/A 1 2 3 4 5
Final N/A 1 2 3 4 5

Request assistance when needed	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
Selects reliable/ valid human performance assessment methods relevant to the client.	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
Obtains accurate information per assessment(s).	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
Adjusts assessments according to client response.	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
Performs assessments in a technically competent manner.	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
Performs programming consistent with the annual or periodized plan.	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
Adapts program to meet the individual needs of the client.	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
Overall category evaluation	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5

Additional Comments:

Use of Logic

Presents rationale for experiential decisions.	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5
Makes decisions within the context of ethical practice and informed consent.	Mid	N/A	1	2	3	4	5
	Final	N/A	1	2	3	4	5

Utilizes information from multiple data sources to make decisions.

Mid N/A 1 2 3 4 5
Final N/A 1 2 3 4 5

Seeks evidence in the process of making decisions.

Mid N/A 1 2 3 4 5
Final N/A 1 2 3 4 5

Critically evaluates published research relevant to human performance

Mid N/A 1 2 3 4 5
Final N/A 1 2 3 4 5

Participates in human performance research.

Mid N/A 1 2 3 4 5
Final N/A 1 2 3 4 5

Describes sources of error in the collection of human performance data.

Mid N/A 1 2 3 4 5
Final N/A 1 2 3 4 5

Demonstrates an ability to make experiential decisions in ambiguous situations.

Mid N/A 1 2 3 4 5
Final N/A 1 2 3 4 5

Distinguishes practices based on traditional beliefs from practices that are scientifically based.

Mid N/A 1 2 3 4 5
Final N/A 1 2 3 4 5

Uses appropriate outcome measures in assessment of ongoing client care.

Mid N/A 1 2 3 4 5
Final N/A 1 2 3 4 5

Overall category evaluation

Mid N/A 1 2 3 4 5
Final N/A 1 2 3 4 5

Additional Comments:

Safety

Abides by pertinent state (province) and federal laws and regulations, including those applying to state statutes.

Mid N/A 1 2 3 4 5

Final N/A 1 2 3 4 5

Identifies situations in which legal questions are present

Mid N/A 1 2 3 4 5

Final N/A 1 2 3 4 5

Reports violations of laws governing practice of human performance.

Mid N/A 1 2 3 4 5

Final N/A 1 2 3 4 5

Abides by relevant ethical codes and standards of practice guidelines.

Mid N/A 1 2 3 4 5

Final N/A 1 2 3 4 5

Adheres to institutional policy and procedures.

Mid N/A 1 2 3 4 5

Final N/A 1 2 3 4 5

Identifies situations in which ethical questions are present.

Mid N/A 1 2 3 4 5

Final N/A 1 2 3 4 5

Reports violations of ethical practice.

Mid N/A 1 2 3 4 5

Final N/A 1 2 3 4 5

Observes health and safety regulations.

Mid N/A 1 2 3 4 5

Final N/A 1 2 3 4 5

Maintains safe working environment.

Mid N/A 1 2 3 4 5

Final N/A 1 2 3 4 5

Recognizes physiological and psychological changes in clients and adjusts programming accordingly.

Mid N/A 1 2 3 4 5

Final N/A 1 2 3 4 5

Demonstrates awareness of contraindications and precautions of programming.

Mid N/A 1 2 3 4 5

Final N/A 1 2 3 4 5

Requests assistance when necessary.

Mid N/A 1 2 3 4 5

Final N/A 1 2 3 4 5

Uses acceptable techniques when working with clients.

Mid N/A 1 2 3 4 5

Final N/A 1 2 3 4 5

Protects welfare of self, client, and others in emergency situations

Mid N/A 1 2 3 4 5
Final N/A 1 2 3 4 5

Overall category evaluation

Mid N/A 1 2 3 4 5
Final N/A 1 2 3 4 5

Additional Comments:

Mid-term Evaluation:

Student Signature: _____ **Date:** _____

Site Supervisor Signature: _____ **Date:** _____

Final Evaluation:

Student Signature: _____ **Date:** _____

Site Supervisor Signature: _____ **Date:** _____

OVERALL COMMENTS:

Appendix D

National Strength and Conditioning Association's Education Recognition Program Guidelines

Education Recognition Program Required Content

Human Anatomy & Physiology
Exercise Physiology
Kinesiology/Biomechanics
Nutrition (sports nutrition is preferred)
Scientific Principles of Strength and Conditioning
Resistance Training and Conditioning (activity class)
Exercise Technique/Exercise Prescription with emphasis in anaerobic exercise
Program Design as related to Strength and Conditioning

PROGRAM REQUIREMENTS

- The sequencing and availability of courses in each of the subject matter areas listed above should be made available to the students.
- The subject matter should be instructed, evaluated, and instructional effectiveness be assessed on a regular basis.
- Program personnel must ensure that the objectives, content, and activities stated in the curriculum represent current concepts and practice.
- Instruction should follow a plan which documents appropriate learning experiences and curriculum sequencing to develop the competencies necessary for graduation, including appropriate instructional materials, classroom presentations, discussions, demonstrations, and supervised practical experience.
- Faculty members responsible for teaching required subject matter should be qualified through professional preparation and experience in their respective academic areas.
- The strength and conditioning curriculum should include provisions for practical experiences under the direct supervision of qualified preceptors in acceptable settings.
- A preceptor should have appropriate experience, as such, in the supervision of students studying strength and conditioning.
- It is the responsibility of the institution (Program Director, Chairperson, and CSCS Sponsor) to notify the NSCA of any changes in the program or in personnel during the period of recognition.

Appendix E
American College of Sports Medicine
Knowledge, Skills and Abilities (KSAs)

KSA Numbering System	KSA description
	GENERAL POPULATION/CORE: EXERCISE PHYSIOLOGY AND RELATED EXERCISE SCIENCE
1.1.1	Knowledge of the structures of bone, skeletal muscle, and connective tissues.
1.1.2	Knowledge of the anatomy and physiology of the cardiovascular system and pulmonary system.
1.1.3	Knowledge of the following muscle action terms: inferior, superior, medial, lateral, supination, pronation, flexion, extension, adduction, abduction, hyperextension, rotation, circumduction, agonist, antagonist, and stabilizer.
1.1.4	Knowledge of the plane in which each movement action occurs and the responsible muscles.
1.1.5	Knowledge of the interrelationships among center of gravity, base of support, balance, stability, posture, and proper spinal alignment.
1.1.6	Knowledge of the curvatures of the spine including lordosis, scoliosis, and kyphosis.
1.1.7	Knowledge of the stretch reflex and how it relates to flexibility.
1.1.8	Knowledge of biomechanical principles that underlie performance of the following activities: walking, jogging, running, swimming, cycling, weight lifting, and carrying or moving objects.
1.1.9	Ability to describe the systems for the production of energy.
1.1.10	Knowledge of the role of aerobic and anaerobic energy systems in the performance of various physical activities.
1.1.11	Knowledge of the following cardiorespiratory terms: ischemia, angina pectoris, tachycardia, bradycardia, arrhythmia, myocardial infarction, claudication, dyspnea and hyperventilation.
1.1.12	Ability to describe normal cardiorespiratory responses to static and dynamic exercise in terms of heart rate, stroke volume, cardiac output, blood pressure, and oxygen consumption.
1.1.13	Knowledge of the heart rate, stroke volume, cardiac output, blood pressure, and oxygen consumption responses to exercise.
1.1.14	Knowledge of the anatomical and physiological adaptations associated with strength training.
1.1.15	Knowledge of the physiological principles related to warm-up and cool-down.
1.1.16	Knowledge of the common theories of muscle fatigue and delayed onset muscle soreness (DOMS).

1.1.17	Knowledge of the physiological adaptations that occur at rest and during submaximal and maximal exercise following chronic aerobic and anaerobic exercise training.
1.1.18	Knowledge of the differences in cardiorespiratory response to acute graded exercise between conditioned and unconditioned individuals.
1.1.19	Knowledge of the structure and function of the skeletal muscle fiber.
1.1.20	Knowledge of the characteristics of fast and slow twitch muscle fibers.
1.1.21	Knowledge of the sliding filament theory of muscle contraction.
1.1.22	Knowledge of twitch, summation, and tetanus with respect to muscle contraction.
1.1.23	Knowledge of the principles involved in promoting gains in muscular strength and endurance.
1.1.24	Knowledge of muscle fatigue as it relates to mode, intensity, duration, and the accumulative effects of exercise.
1.1.26	Knowledge of the response of the following variables to acute static and dynamic exercise: heart rate, stroke volume, cardiac output, pulmonary ventilation, tidal volume, respiratory rate, and arteriovenous oxygen difference.
1.1.27	Knowledge of blood pressure responses associated with acute exercise, including changes in body position.
1.1.28	Knowledge of and ability to describe the implications of ventilatory threshold (anaerobic threshold) as it relates to exercise training and cardiorespiratory assessment.
1.1.29	Knowledge of and ability to describe the physiological adaptations of the pulmonary system that occur at rest and during submaximal and maximal exercise following chronic aerobic and anaerobic training.
1.1.30	Knowledge of how each of the following differs from the normal condition: dyspnea, hypoxia, and hyperventilation.
1.1.31	Knowledge of how the principles of specificity and progressive overload relate to the components of exercise programming.
1.1.32	Knowledge of the concept of detraining or reversibility of conditioning and its implications in exercise programs.
1.1.33	Knowledge of the physical and psychological signs of overreaching/overtraining and to provide recommendations for these problems.
1.1.34	Knowledge of and ability to describe the changes that occur in maturation from childhood to adulthood for the following: skeletal muscle, bone, reaction time, coordination, posture, heat and cold tolerance, maximal oxygen consumption, strength, flexibility, body composition, resting and maximal heart rate, and resting and maximal blood pressure.
1.1.35	Knowledge of the effect of the aging process on the musculoskeletal and cardiovascular structure and function at rest, during exercise, and during recovery.
1.1.36	Knowledge of the following terms: progressive resistance, isotonic/isometric, concentric, eccentric, atrophy, hyperplasia, hypertrophy, sets, repetitions, plyometrics, Valsalva maneuver.

1.1.37	Knowledge of and skill to demonstrate exercises designed to enhance muscular strength and/or endurance of specific major muscle groups.
1.1.38	Knowledge of and skill to demonstrate exercises for enhancing musculoskeletal flexibility.
1.1.39	Ability to identify the major muscles. Major muscles include, but are not limited to, the following: trapezius, pectoralis major, latissimus dorsi, biceps, triceps, rectus abdominis, internal and external obliques, erector spinae, gluteus maximus, quadriceps, hamstrings, adductors, abductors, and gastrocnemius.
1.1.40	Ability to identify the major bones. Major bones include, but are not limited to the clavicle, scapula, sternum, humerus, carpals, ulna, radius, femur, fibia, tibia, and tarsals.
1.1.41	Ability to identify the joints of the body.
1.1.42	Knowledge of the primary action and joint range of motion for each major muscle group.
1.1.43	Ability to locate the anatomic landmarks for palpation of peripheral pulses and blood pressure.
	GENERAL POPULATION/CORE: PATHOPHYSIOLOGY AND RISK FACTORS
1.2.1	Knowledge of the physiological and metabolic responses to exercise associated with chronic disease (heart disease, hypertension, diabetes mellitus, and pulmonary disease).
1.2.2	Knowledge of cardiovascular, pulmonary, metabolic, and musculoskeletal risk factors that may require further evaluation by medical or allied health professionals before participation in physical activity.
1.2.3	Knowledge of risk factors that may be favorably modified by physical activity habits.
1.2.4	Knowledge to define the following terms: total cholesterol (TC), high-density lipoprotein cholesterol (HDL-C), TC/HDL-C ratio, low-density lipoprotein cholesterol (LDL-C), triglycerides, hypertension, and atherosclerosis.
1.2.5	Knowledge of plasma cholesterol levels for adults as recommended by the National Cholesterol Education Program.
1.2.6	Knowledge of the risk factor thresholds for ACSM risk stratification which includes genetic and lifestyle factors related to the development of CAD.
1.2.7	Knowledge of the atherosclerotic process, the factors involved in its genesis and progression, and the potential role of exercise in treatment.
1.2.8	Knowledge of how lifestyle factors, including nutrition and physical activity, influence lipid and lipoprotein profiles.
	GENERAL POPULATION/CORE: HEALTH APPRAISAL, FITNESS AND CLINICAL EXERCISE TESTING
1.3.1	Knowledge of and ability to discuss the physiological basis of the major components of physical fitness: flexibility, cardiovascular fitness, muscular strength, muscular endurance, and body composition.

1.3.2	Knowledge of the value of the health/medical history.
1.3.3	Knowledge of the value of a medical clearance prior to exercise participation.
1.3.4	Knowledge of and the ability to perform risk stratification and its implications towards medical clearance prior to administration of an exercise test or participation in an exercise program.
1.3.5	Knowledge of relative and absolute contraindications to exercise testing or participation.
1.3.6	Knowledge of the limitations of informed consent and medical clearance prior to exercise testing.
1.3.7	Knowledge of the advantages/disadvantages and limitations of the various body composition techniques including but not limited to: air displacement plethysmography (BOD POD [®]), dual energy X-ray absorptiometry (DEXA), hydrostatic weighing, skinfolds and bioelectrical impedance.
1.3.8	Skill in accurately measuring heart rate, blood pressure, and obtaining rating of perceived exertion (RPE) at rest and during exercise according to established guidelines.
1.3.9	Skill in measuring skinfold sites, skeletal diameters, and girth measurements used for estimating body composition.
1.3.10	Knowledge of calibration of a cycle ergometer and a motor-driven treadmill.
1.3.11	Ability to locate the brachial artery and correctly place the cuff and stethoscope in position for blood pressure measurement.
1.3.12	Ability to locate common sites for measurement of skinfold thicknesses and circumferences (for determination of body composition and waist-hip ratio).
1.3.13	Ability to obtain a health history and risk appraisal that includes past and current medical history, family history of cardiac disease, orthopedic limitations, prescribed medications, activity patterns, nutritional habits, stress and anxiety levels, and smoking and alcohol use.
1.3.14	Ability to obtain informed consent.
1.3.15	Ability to explain the purpose and procedures and perform the monitoring (HR, RPE and BP) of clients prior to, during, and after cardiorespiratory fitness testing.
1.3.16	Ability to instruct participants in the use of equipment and test procedures.
1.3.17	Ability to explain purpose of testing, determine an appropriate submaximal or maximal protocol, and perform an assessment of cardiovascular fitness on the treadmill or the cycle ergometer.
1.3.18	Ability to describe the purpose of testing, determine appropriate protocols, and perform assessments of muscular strength, muscular endurance, and flexibility.
1.3.19	Ability to perform various techniques of assessing body composition.
1.3.20	Ability to analyze and interpret information obtained from the cardiorespiratory fitness test and the muscular strength and endurance, flexibility, and body composition assessments for apparently healthy individuals and those with controlled chronic disease.

1.3.21	Ability to identify appropriate criteria for terminating a fitness evaluation and demonstrate proper procedures to be followed after discontinuing such a test.
1.3.22	Ability to modify protocols and procedures for cardiorespiratory fitness tests in children, adolescents, and older adults.
1.3.23	Ability to identify individuals for whom physician supervision is recommended during maximal and submaximal exercise testing.
	GENERAL POPULATION/CORE: ELECTROCARDIOGRAPHY AND DIAGNOSTIC TECHNIQUES
1.4.1	Knowledge of how each of the following arrhythmias differs from the normal condition: premature atrial contractions and premature ventricular contractions.
1.4.3	Knowledge of the basic properties of cardiac muscle and the normal pathways of conduction in the heart.
	GENERAL POPULATION/CORE: PATIENT MANAGEMENT AND MEDICATIONS
1.5.1	Knowledge of common drugs from each of the following classes of medications and describe the principal action and the effects on exercise testing and prescription including antianginals; antihypertensives; antiarrhythmics; anticoagulants, bronchodilators; hypoglycemics; psychotropics; and vasodilators.
1.5.2	Knowledge of the effects of the following substances on the exercise response such as antihistamines, tranquilizers, alcohol, diet pills, cold tablets, caffeine, and nicotine.
	GENERAL POPULATION/CORE EXERCISE PRESCRIPTION AND PROGRAMMING
1.7.1	Knowledge of the relationship between the number of repetitions, intensity, number of sets, and rest with regard to strength training.
1.7.2	Knowledge of the benefits and precautions associated with exercise training in apparently healthy and controlled disease.
1.7.3	Knowledge of the benefits and precautions associated with exercise training in across the lifespan (from youth to the elderly).
1.7.4	Knowledge of specific group exercise leadership techniques appropriate for working with participants of all ages.
1.7.5	Knowledge of how to select and/or modify appropriate exercise programs according the age, functional capacity and limitations of the individual.
1.7.6	Knowledge of the differences in the development of an exercise prescription for children, adolescents, and older participants.
1.7.7	Knowledge of and ability to describe the unique adaptations to exercise training in children, adolescents, and older participants with regard to strength, functional capacity, and motor skills.
1.7.8	Knowledge of common orthopedic and cardiovascular considerations for older participants and the ability to describe modifications in exercise prescription that are indicated.

1.7.10	Knowledge of the recommended intensity, duration, frequency, and type of physical activity necessary for development of cardiorespiratory fitness in an apparently healthy population.
1.7.11	Knowledge of and the ability to describe exercises designed to enhance muscular strength and/or endurance of specific major muscle groups.
1.7.12	Knowledge of the principles of overload, specificity, and progression and how they relate to exercise programming.
1.7.13	Knowledge of the various types of interval, continuous, and circuit training programs.
1.7.14	Knowledge of approximate METs for various sport, recreational, and work tasks.
1.7.15	Knowledge of the components incorporated into an exercise session and the proper sequence (i.e., preexercise evaluation, warm-up, aerobic stimulus phase, cool-down, muscular strength and/or endurance, and flexibility).
1.7.16	Knowledge of special precautions and modifications of exercise programming for participation at altitude, different ambient temperatures, humidity, and environmental pollution.
1.7.17	Knowledge of the importance of recording exercise sessions and performing periodic evaluations to assess changes in fitness status.
1.7.18	Knowledge of the advantages and disadvantages of implementation of interval, continuous, and circuit training programs.
1.7.19	Knowledge of the exercise programs that are available in the community and how these programs are appropriate for various populations.
1.7.20	Knowledge of and ability to describe "Activities of Daily Living" (ADLs) and its importance in the overall health of the individual.
1.7.21	Skill to teach and demonstrate the components of an exercise session (i.e., warm-up, aerobic stimulus phase, cool-down, muscular strength/endurance, flexibility).
1.7.22	Skill to teach and demonstrate appropriate modifications in specific exercises for groups such as older adults, pregnant and postnatal women, obese persons, and persons with low back pain.
1.7.23	Skill to teach and demonstrate appropriate exercises for improving range of motion of all major joints.
1.7.24	Skill in the use of various methods for establishing and monitoring levels of exercise intensity, including heart rate, RPE, and oxygen cost.
1.7.25	Ability to identify and apply methods used to monitor exercise intensity, including heart rate and rating of perceived exertion.
1.7.26	Ability to describe modifications in exercise prescriptions for individuals with functional disabilities and musculoskeletal injuries.
1.7.27	Ability to differentiate between the amount of physical activity required for health benefits and/or for fitness development.
1.7.28	Knowledge of and ability to determine target heart rates using two methods: percent of age-predicted maximum heart rate and heart rate reserve (Karvonen).

1.7.29	Ability to identify proper and improper technique in the use of resistive equipment such as stability balls, weights, bands, resistance bars, and water exercise equipment.
1.7.30	Ability to identify proper and improper technique in the use of cardiovascular conditioning equipment (e.g., stairclimbers, stationary cycles, treadmills, elliptical trainers, rowing machines).
1.7.31	Ability to teach a progression of exercises for all major muscle groups to improve muscular strength and endurance.
1.7.32	Ability to communicate appropriately with exercise participants during initial screening and exercise programming.
1.7.33	Ability to design, implement, and evaluate individualized and group exercise programs based on health history and physical fitness assessments.
1.7.34	Ability to modify exercises based on age, physical condition and cognitive status.
1.7.35	Ability to apply energy cost, V.O. ₂ , METs, and target heart rates to an exercise prescription.
1.7.36	Ability to convert between the U.S. and Metric systems for length/height (inches to centimeters), weight (pounds to kilograms) and speed (miles per hour to meters per minute).
1.7.37	Ability to convert between absolute (mL/min ⁻¹ or L/min ⁻¹) and relative oxygen costs (mL/kg ⁻¹ .min ⁻¹ , and/or METs).
1.7.38	Ability to determine the energy cost for given exercise intensities during horizontal and graded walking and running stepping exercise, cycle ergometry, arm ergometry and stepping.
1.7.39	Ability to prescribe exercise intensity based on VO ₂ data for different modes of exercise, including graded and horizontal running and walking, cycling, and stepping exercise.
1.7.40	Ability to explain and implement exercise prescription guidelines for apparently healthy clients, increased risk clients, and clients with controlled disease.
1.7.41	Ability to adapt frequency, intensity, duration, mode, progression, level of supervision, and monitoring techniques in exercise programs for patients with controlled chronic disease (e.g., heart disease, diabetes mellitus, obesity, and hypertension), musculoskeletal problems (including fatigue), pregnancy and/or postpartum, and exercise-induced asthma.
1.7.42	Ability to design resistive exercise programs to increase or maintain muscular strength and/or endurance.
1.7.43	Ability to evaluate flexibility and prescribe appropriate flexibility exercises for all major muscle groups.
1.7.44	Ability to design training programs using interval, continuous, and circuit training programs.
1.7.45	Ability to describe the advantages and disadvantages of various commercial exercise equipment in developing cardiorespiratory fitness, muscular strength, and muscular endurance.
1.7.46	Ability to modify exercise programs based on age, physical condition, and current health status.

1.7.47	Ability to assess postural alignment and recommend appropriate exercise to meet individual needs and refer as necessary.
	GENERAL POPULATION/CORE: NUTRITION AND WEIGHT MANAGEMENT
1.8.1	Knowledge of the role of carbohydrates, fats, and proteins as fuels for aerobic and anaerobic metabolism.
1.8.2	Knowledge of the following terms: obesity, overweight, percent fat, BMI, lean body mass, anorexia nervosa, bulimia, metabolic syndrome and body fat distribution.
1.8.3	Knowledge of the relationship between body composition and health.
1.8.4	Knowledge of the effects of diet, exercise and behavior modification as methods for modifying body composition.
1.8.5	Knowledge of the importance of an adequate daily energy intake for healthy weight management.
1.8.6	Knowledge of the difference between fat-soluble and water-soluble vitamins.
1.8.7	Knowledge of the importance of maintaining normal hydration before, during, and after exercise.
1.8.8	Knowledge of the USDA Food Pyramid and Dietary Guidelines for Americans.
1.8.9	Knowledge of the importance of calcium and iron in women's health.
1.8.10	Knowledge of the myths and consequences associated with inappropriate weight loss methods (e.g., fad diets, dietary supplements, over-exercising, starvation diets).
1.8.11	Knowledge of the number of kilocalories in one gram of carbohydrate, fat, protein, and alcohol.
1.8.12	Knowledge of the number of kilocalories equivalent to losing 1 pound of body fat and the ability to prescribe appropriate amount of exercise to achieve weight loss goals.
1.8.13	Knowledge of the guidelines for caloric intake for an individual desiring to lose or gain weight.
1.8.14	Knowledge of common nutritional ergogenic aids, the purported mechanism of action, and any risk and/or benefits (e.g., carbohydrates, protein/amino acids, vitamins, minerals, herbal products, creatine, steroids, caffeine).
1.8.15	Knowledge of nutritional factors related to the female athlete triad syndrome (i.e., eating disorders, menstrual cycle abnormalities, and osteoporosis).
1.8.16	Knowledge of the NIH Consensus statement regarding health risks of obesity, Nutrition for Physical Fitness Position Paper of the American Dietetic Association, and the ACSM Position Stand on proper and improper weight loss programs.
1.8.17	Ability to describe the health implications of variation in body fat distribution patterns and the significance of the waist to hip ratio.
1.8.18	Knowledge of the nutrition and exercise effects on blood glucose levels in diabetes.

	GENERAL POPULATION/CORE: HUMAN BEHAVIOR AND COUNSELING
1.9.1	Knowledge of behavioral strategies to enhance exercise and health behavior change (e.g., reinforcement, goal setting, social support).
1.9.2	Knowledge of the important elements that should be included in each behavior modification session.
1.9.3	Knowledge of specific techniques to enhance motivation (e.g., posters, recognition, bulletin boards, games, competitions).
1.9.4	Knowledge of extrinsic and intrinsic reinforcement and give examples of each.
1.9.5	Knowledge of the stages of motivational readiness.
1.9.6	Knowledge of approaches that may assist less motivated clients to increase their physical activity.
1.9.7	Knowledge of signs and symptoms of mental health states (e.g., anxiety, depression, eating disorders) that may necessitate referral to a medical or mental health professional.
1.9.8	Knowledge of the potential symptoms and causal factors of test anxiety (i.e., performance, appraisal threat during exercise testing) and how it may affect physiological responses to testing.
1.9.9	Ability to coach clients to set achievable goals and overcome obstacles through a variety of methods (e.g., in person, phone, and internet).
	GENERAL POPULATION/CORE: SAFETY, INJURY PREVENTION, AND EMERGENCY PROCEDURES
1.10.1	Knowledge of and skill in obtaining basic life support, first aid, cardiopulmonary resuscitation, and automated external defibrillator certifications.
1.10.2	Knowledge of appropriate emergency procedures (i.e., telephone procedures, written emergency procedures, personnel responsibilities) in a health and fitness setting.
1.10.3	Knowledge of and skill in performing basic first aid procedures for exercise-related injuries, such as bleeding, strains/sprains, fractures, and exercise intolerance (dizziness, syncope, heat and cold injuries).
1.10.4	Knowledge of basic precautions taken in an exercise setting to ensure participant safety.
1.10.5	Knowledge of the physical and physiological signs and symptoms of overtraining and the ability to modify a program to accommodate this condition.
1.10.6	Knowledge of the effects of temperature, humidity, altitude, and pollution on the physiological response to exercise and the ability to modify the exercise prescription to accommodate for these environmental conditions.
1.10.7	Knowledge of the signs and symptoms of the following conditions: shin splints, sprain, strain, tennis elbow, bursitis, stress fracture, tendonitis, patellar femoral pain syndrome, low back pain, plantar fasciitis, and rotator cuff tendonitis and the ability to recommend exercises to prevent these injuries.

1.10.8	Knowledge of hypothetical concerns and potential risks that may be associated with the use of exercises such as straight leg sit-ups, double leg raises, full squats, hurdlers stretch, yoga plough, forceful back hyperextension, and standing bent-over toe touch.
1.10.9	Knowledge of safety plans, emergency procedures, and first aid techniques needed during fitness evaluations, exercise testing, and exercise training.
1.10.10	Knowledge of the health/fitness instructor's responsibilities, limitations, and the legal implications of carrying out emergency procedures.
1.10.11	Knowledge of 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).
1.10.12	Knowledge of the initial management and first aid techniques associated with open wounds, musculoskeletal injuries, cardiovascular/pulmonary complications, and metabolic disorders.
1.10.13	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.
1.10.14	Knowledge of the legal implications of documented safety procedures, the use of incident documents, and ongoing safety training documentation for the purposes of safety and risk management.
1.10.15	Skill to demonstrate exercises used for people with low back pain, neck, shoulder, elbow, wrist, hip, knee and/or ankle pain; and the ability to modify a program for people with these conditions.
1.10.16	Skill in demonstrating appropriate emergency procedures during exercise testing and/or training.
1.10.17	Ability to identify the components that contributes to the maintenance of a safe environment including equipment operation and maintenance, proper sanitation, safety and maintenance of exercise areas, and overall facility maintenance.
1.10.18	Knowledge of basic ergonomics to address daily activities that may cause musculoskeletal problems in the workplace, and the ability to recommend exercises to alleviate symptoms caused by repetitive movements.
	GENERAL POPULATION/CORE: PROGRAM ADMINISTRATION, QUALITY ASSURANCE, AND OUTCOME ASSESSMENT
1.11.1	Knowledge of the health/fitness instructor's role in administration and program management within a health/fitness facility.
1.11.2	Knowledge of and the ability to use the documentation required when a client shows signs or symptoms during an exercise session and should be referred to a physician.
1.11.3	Knowledge of how to manage of a fitness department (e.g., working within a budget, interviewing and training staff, scheduling, running staff meetings, staff development).

1.11.4	Knowledge of the importance of tracking and evaluating member retention.
1.11.6	Ability to administer fitness-related programs within established budgetary guidelines.
1.11.7	Ability to develop marketing materials for the purpose of promoting fitness-related programs.
1.11.8	Ability to create and maintain records pertaining to participant exercise adherence, retention, and goal setting.
1.11.9	Ability to develop and administer educational programs (e.g., lectures, workshops) and educational materials.
1.11.10	Knowledge of basic sales techniques to promote health, fitness, and wellness services.
1.11.11	Knowledge of networking techniques with other health care professionals for referral purposes.
1.11.12	Ability to provide and administer appropriate customer service.
1.11.13	Knowledge of the importance of tracking and evaluating health promotion program results.
	CARDIOVASCULAR: PATHOPHYSIOLOGY AND RISK FACTORS
2.2.1	Knowledge of cardiovascular risk factors or conditions that may require consultation with medical personnel before testing or training, including inappropriate changes of resting or exercise heart rate and blood pressure, new onset discomfort in chest, neck, shoulder, or arm, changes in the pattern of discomfort during rest or exercise, fainting or dizzy spells, and claudication.
2.2.2	Knowledge of the pathophysiology of myocardial ischemia and infarction.
2.2.3	Knowledge the pathophysiology of stroke, hypertension, and hyperlipidemia.
2.2.4	Knowledge the effects of the above diseases and conditions on the cardiorespiratory responses at rest and during exercise.
	PULMONARY: PATHOPHYSIOLOGY AND RISK FACTORS
3.2.1	Knowledge of pulmonary risk factors or conditions that may require consultation with medical personnel before testing or training, including asthma, exercise-induced asthma/bronchospasm, extreme breathlessness at rest or during exercise, bronchitis, and emphysema.
	METABOLIC: PATHOPHYSIOLOGY AND RISK FACTORS
4.2.1	Knowledge of metabolic risk factors or conditions that may require consultation with medical personnel before testing or training, including obesity, metabolic syndrome, thyroid disease, kidney disease, diabetes or glucose intolerance, and hypoglycemia.

	ORTHOPEDIC/MUSCULOSKELETAL: PATHOPHYSIOLOGY AND RISK FACTORS
5.2.1	Knowledge of musculoskeletal risk factors or conditions that may require consultation with medical personnel before testing or training, including acute or chronic back pain, osteoarthritis, rheumatoid arthritis, osteoporosis, inflammation/pain, and low back pain.
	NEUROMUSCULAR: PATHOPHYSIOLOGY AND RISK FACTORS
6.2.1	Knowledge of neuromuscular risk factors or conditions that may require consultation with medical personnel before testing or training, including spinal cord injuries and multiple sclerosis.
	IMMUNOLOGIC: PATHOPHYSIOLOGY AND RISK FACTORS
7.2.1	Knowledge of immunologic risk factors or conditions that may require consultation with medical personnel before testing or training, including AIDS and cancer.