COMPREHENSIVE PROGRAM REVIEW

COLLEGE OF EDUCATION

DEPARTMENT OF COUNSELING, EDUCATIONAL LEADERSHIP, AND PROFESSIONAL STUDIES

B.S., EXERCISE SCIENCE
SELF-STUDY

EXECUTIVE SUMMARY FOR
B.S., EXERCISE SCIENCE

Major Findings of the Program's Quality and Productivity

The B.S., Exercise Science degree program is a growing, vigorous, diverse program that is cost-effective and valuable to students and to the region. This program has been operated over the years with a minimum of faculty support and modest resources. The program has had an average of 82.75 declared majors from 2001-2005. It has the second highest annual graduation rate in the College of Education with an average of 15.25 degrees conferred each year (2001-2005). Graduation numbers are similar to Kennesaw State University (on a per capita basis), which is the only state college in Georgia other than CSU that has a program vigorous enough to essentially stand alone (Kennesaw has a Health Science component). Other institutions imbed Exercise Science in B.S.Ed. programs. Graduates have been widely accepted into Medical Schools and other graduate programs across the nation. In the last five years there have been 16 graduates accepted to traditional graduate programs, 13 accepted to medical programs, and 7 commissioned by the U.S. Army. Nineteen students have been employed in more traditional health/fitness occupations.

The curriculum has a strong elective component that allows students to select courses that best fit their professional/employment goals. This creates great flexibility and is student friendly but is advising-intensive and demands a major portion of the faculty member's non-instructional time. The sequencing/offering of courses is logical and facilitates students in their rapid movement to graduation. Most students, once being identified as Exercise Science majors, complete degree requirements on average in 26.9 months.

The addition of a second full-time faculty member in the Fall, 2005, has allowed class size to decrease so that the classroom experience is optimized for students, and, has added philosophical and expertise dimensions to the program. Research training is scheduled into required courses and meaningful research opportunities are present for those who are motivated and capable. Faculty note that research has been on-going, but recommend that research productivity be emphasized. Students enjoy an open-door advisement policy that maximizes contact with faculty and provides opportunities for advisement far beyond class scheduling.

Overall Rating of Quality and Productivity: Very Strong

List of Recommendations for Improving Program Quality

1. There is a need to identify minimal entrance standards for Exercise Science that does not impact diversity negatively or artificially exclude motivated students.

2. An effort to obtain more formal feedback from graduates, graduate schools, and employers are recommended to develop quantitative support for qualitative assessment.

3. An emphasis on research and publication that maximizes resources provided through professional development funding and other resources developed by faculty.

List of Recommendations for Improving Program Productivity
There is no apparent system problem in this regard.

Conclusion about Exercise Science Viability at CSU
Exercise Science has been and continues to be an extremely viable program at Columbus State University. A consideration of need, support of CSU mission, cost, faculty resources, and productivity all speak clearly to the viability of the program. The direction that the program will take will be determined ultimately by resources and line supervision in the University.

Program Improvement Plan
In response to the findings of the Comprehensive Program Review, the faculty members and administrators of the B.S. in Exercise Science propose the strategies outlined below to improve the quality, productivity and viability of the program. These strategies will be facilitated by the Program Coordinator of the Exercise Science program.

Departmental Plans and Priorities	***CPR Indicator***	***Projected Timeline***
1. Develop appropriate admission criteria for candidates desiring to major in Exercise Science	Quality Productivity Viability	2006-2007
2. Develop and implement an assessment system to document student learning and employer satisfaction/need	Quality Productivity Viability	2006-Ongoing
3. Develop a plan, timeline and budget to obtain program accreditation.	Quality Productivity Viability	2006-Ongoing

The resources needed to accomplish these priorities may be substantial, especially in regard to the development of an assessment system and the development of a plan to pursue program accreditation. Departmental resources will be allocated as necessary to accomplish these plans. The Exercise Science Program Coordinator will be provided one course release time each academic year to provide leadership to these activities. The Program Coordinator will communicate additional resource requests as needed to the appropriate administrator within the College of Education at Columbus State University.

Summary Recommendation and Supporting Rationale: Maintain Program at the Current Level

It is recommended that faculty review and revise program admission criteria for candidates; develop and refine an assessment system that gauges student learning and program effectiveness; and develop an initial plan for program accreditation. Additionally, it is recommended that faculty continue to gather data regarding the efficacy of developing a Master's level program in Exercise Science.

EXERCISE SCIENCE SELF-STUDY

I. EXERCISE SCIENCE OVERVIEW

The B.S., Exercise Science degree program at Columbus State University is a program of study that was designed to meet the needs of an array of students. All students are required to take a common core of Exercise Science content as well as a very liberal program elective component. Program elective in this context refers to coursework selected by the student during consultation with an advisor that is designed to meet specific professional and/or occupational goals. These characteristics have produced a program that is "advising-intensive" but very flexible, capable of meeting the educational needs of many students.

The development and evolution of the Exercise Science program at CSU has been driven by market conditions, most notably by the dramatic expansion of "second-level" medical programs (physical therapy, physical therapy assistant, occupational therapy, physician assistant, etc.) over the past 15-20 years. There has also been an expanding need in hospital-based wellness, corporate wellness, and the general fitness market. In brief, there has been an increased demand for individuals with a sound understanding of Exercise Science content at a variety of academic levels. The mission of the Exercise Science program has therefore been to provide an academic platform for students who require a high level of academic functioning (i.e., physician assistant, physical therapy), those for whom academic sophistication is not as critical but important (i.e., club fitness), and the many gradations between.

The Exercise Science content is very good but has been delimited by the availability of faculty. This issue has been addressed by providing a regular rotation of core courses and the periodic use of special topics courses to target specific needs for smaller groups of students (EKG interpretation, prescription/OT drug effects in exercise, environmental physiology, etc).

II. Summary Findings of the Program's Overall Quality

II. SUMMARY FINDINGS OF EXERCISE SCIENCE OVERALL QUALITY

The B.S., Exercise Science degree program is a growing, vigorous, diverse program that is cost-effective and valuable to students and the region. The major strengths of the program are its flexibility to accommodate a wide range of students, faculty expertise and quality teaching, outstanding advisement, outstanding facilities, cross-discipline emphasis, and service to the university and community. Limitations have been primarily a function of limited resources. Given limited faculty resources decisions and functions were necessarily ranked and delivered in terms of importance to students.

Current data to support some facets of the evaluative proves are not available and probably will not be in this cycle. Meaningful statistics in some instances could not be constructed retrospectively and a description of processes and outcomes are presented

qualitatively. In some instances simple numbers do not convey the meaning or complexity of a process.

II.A. THE QUALITY OF TEACHING SUPPORTING THE PROGRAM

Quality Teaching/Reward.

In the Exercise Science program teaching quality is assessed in a number of ways. Student evaluations of teaching performance (a minimum of twice annually) utilizing a standard form is the primary formal basis for evaluation. These forms evaluate teaching quality along five dimensions; attitude towards students, subject matter presentation, classroom atmosphere, grading practices, and teacher effectiveness. Perhaps more importantly, there is an on-going informal evaluation of teacher behavior and effectiveness. Faculty solicit feedback from students during the semester, solicit feedback from graduates, and, self-evaluate many of those same dimensions attended to in the formal student evaluation; subject matter presentation (scope and sequence), classroom atmosphere/class control, and grading practices. Once feedback is gathered it is reviewed by faculty who make recommendations for program improvement. The program is regularly reviewed during meetings with faculty from Exercise Science and the CELPS Department. Faculty input is sought and used in revision of teaching practices and program procedures.

Reward, other than intrinsic rewards provided by knowledge of a task well done or student success, is the responsibility of the department chair as is the final administrative determination of teaching effectiveness. Financial/professional rewards (pay raises, promotion, and tenure) reside primarily within the academic unit although line supervisors and other faculty provide oversight at a number of levels of the university. Pay raises (total budget and how the raises are to be administered) are regulated by the Georgia Legislature and have historically been too small to be described as reward.

Advisement. Within the Exercise Science program advisement is viewed as a critical component of effective teaching. Exercise Science is the only undergraduate unit in the College of Education where full-time instructional faculty members are responsible for advisement of students. Further, advisement includes one-on-one career counseling and planning in addition to issues related to schedule planning and registration. Further, clearance of degree evaluation reports (in consultation with Registrar officials) and degree progress substitutions where appropriate are regular and on-going advising functions.

Tutoring. Tutoring for the university core curriculum is provided for all students by the Center for Academic Support. It includes free tutoring one-on-one for most courses and drop-in labs for math and chemistry courses. Tutoring for Exercise Science courses is not a regular feature of the program. However, students are free to meet with individual faculty to address concerns, issues, or academic concepts that may be relevant to them. Repetition/review in the classroom and freedom to ask questions in class acts as a proxy

in most cases for the need for specific tutorial services. Also, students often develop their own study groups to assist each other with difficult materials.

Internship. A formal internship (EXSC 4698, 12 SH) is a requirement in the Exercise Science curriculum, with occasional exception. Students are actually encouraged to develop a cooperative work experience with employers in the Columbus area in lieu of internship. The formal internship is perceived as a less favorable but necessary proxy for "real world" experience for many students.

Internships are researched and chosen by the student, in consultation with the academic advisor. Internships are often completed within a 250 mile radius of Columbus although individuals who are motivated can and do complete internships and other study in other states and abroad. For example, a student recently completed an internship with the United States Olympic Committee in Maine. Another completed a study abroad program in London. As with other phases of the program, an attempt is made to match specific internship experiences with the needs of the student rather than create an *a priori*, one-size-fits-all approach. Individual study/research opportunities are also available to a select group that has the academic skills and motivation.

Informal Faculty/Student Interaction: Students and faculty interact in the classroom in a semi-formal manner, students meet with faculty advisors at least once a semester, students and faculty speak informally individually and in groups between classes, and faculty meet informally with students who choose to visit in the faculty's office. Some students take advantage of these opportunities, others do not. In many cases it is the personality of the student that dictates the opportunity for interaction, not the availability of faculty.

Students often have jobs, personal relationships, varsity athletics, families, and other responsibilities that capture their time (study?). Consequently, the need for a social mechanism to bring faculty and students together has never been voiced by students.

Program Improvement. Program improvement is an on-going concern within Exercise Science. An informal analysis of the degree progress sheets over the past 15 years speaks volumes to the importance of planning and responding to changing needs. The presence of a B.S. in Exercise Science (as opposed to a B.S.Ed. in Sport Fitness Management) reflects the desire of the faculty to have a program that reflects the needs of the students, needs of the community, and, draws on the expertise of the faculty.

Informal and solicited feedback from graduates has resulted in the removal of courses, the addition of courses, and major modification of existing courses. Current students and recent graduates are also asked regularly for feedback about specific curricular concerns. Of specific interest is the degree to which the Exercise Science program meets the needs of students whose interest is in medical and non-medical graduate study. A good example of the use of student feedback is the current content in EXSC 3135, Kinesiology. This course was designed and delivered initially to be a balance between anatomical kinesiology and biomechanics. Feedback from students who were successful in Physical

Therapy reinforced the idea that *mastery* of anatomical kinesiology was more important to their success in medical school than broad-based content. Consequently, the course content, pedagogical techniques, and evaluation have changed to produce the desired result.

A common procedure has been to identify a potential need, write a new course to meet the perceived need, test the course under the EXSC 5545 offering, Selected Topics in Exercise Science, and then to make adjustments to the course based on faculty and student input. If the course is judged to productive and acceptable to students and faculty, then a permanent course listing is pursued through university curriculum channels. Currently, three new upper division courses are being prepared for the COE curriculum committee based on test administration during the 2003-2005 school years.

Rating: Very Strong

II.B. THE QUALITY OF THE CURRICULUM SUPPORTING THE PROGRAM

Relationship Between Curriculum and Outcomes. The initial development of the Exercise Science program of study was based on an analysis of the needs of Columbus State University students, the needs of the geographical region, and, the knowledge, skills, and abilities of the faculty existing at the time. As external and internal factors have changed the program's curriculum has necessarily changed. Desired outcomes have driven curriculum planning and changes throughout the evaluation cycles. However, pragmatism limits the number and detail of specific outcomes for level III planning. One should not assume that the formal set of intended outcomes is exhaustive.

Incorporation of Technological Skills. A basic computer technology course has been a requirement for Exercise Science since its inception, well before a university- or system-wide technology requirement existed. In addition, industry-specific software and hardware is integrated routinely into many courses, e.g., EXSC 2105, (Weight Control), EXSC 4331 (Exercise Physiology Lab), EXSC 4337 (Nutritional Bases of Human Performance Lab), and EXSC 4698 (Internship). Opportunities to reinforce and extend basic computer/presentation skills are found in virtually every course.

Relevance to Student Needs. Relevance to student needs has been a major driving force in the development of the Exercise Science curriculum. The flexibility of the program as evidenced by the substantial elective component has created a mechanism that allows for the tailoring of an individual's coursework to meet their specific needs. With this model the faculty has rejected the "one size fits all" approach to curriculum development.

Cross-discipline Emphasis. A recurring problem in education is the perspective that a chosen major and degree is all that is important. Mathematics, biology, psychology and other academic disciplines are perceived as hurdles that must be endured so that an individual can achieve their personal goal. This perspective was captured by a parent of a student who referred to the University core curriculum as an "educational sewer". The perspective may also be reinforced by the increasingly vocational perspective of parents and students (e.g., "I need a degree to get a job").

The University's core curriculum ensures a minimal exposure to other disciplines. However, experience teaches that exposure does not necessarily ensure that students will learn to appreciate the contribution that other disciplines make to their chosen field of study.

Exercise Science is a truly multi-disciplinary program of study. Human biology, medicine, health, physics, mathematics, psychology, and other disciplines all make immeasurable contributions to the field. The multi-dimensional nature of the discipline is most evident and is emphasized continually in entry level courses (e.g., EXSC 3135, Kinesiology and EXSC 4131, Exercise Physiology).

Diversity, Multiculturalism, International Perspective. Differences among individuals of race and ethnic origin, in regard to human performance, pale in comparison to the similarities. Consequently, there is no major or highly structured emphasis in that regard. However, the Exercise Science program is diverse and international/ethnic awareness is often an unplanned consequence of normal classroom interaction. It is not unusual to examine issues regarding access to healthcare, incidence/prevalence of disease, cultural acceptance of exercise, cultural eating patterns, and similar topics in the course of examining more basic and common issues. Student interest and comfort is more often the catalyst for these discussions.

Program Improvement. Program improvement is an on-going concern within Exercise Science. A common procedure has been to identify a perceived need, make adjustments/changes based on those needs, and then evaluate the effectiveness of the change.

Rating: Very Strong

II.C. SELECTIVITY, ACADEMIC ACHIEVEMENT, AND SATISFACTION OF STUDENTS IN THE PROGRAM

Characteristics of Students. Exercise Science majors represent an extremely heterogeneous mixture along a variety of academic and demographic dimensions. More than one-third of all students are non-white or international students. Most are under 25 years of age and therefore represent a more traditional cohort. Two-thirds are female.

Average SAT Verbal, Quantitative and combined scores for 2004/2005 were 475, 480, and 955, respectively, which supports the contention that most Exercise Science students have the basic skills necessary for academic success. Estimates of variation on these measures are not available. However, experience teaches that students exist that have great academic preparation and ability, and, some exist that have minimal or substandard preparation. The presence of variation *per se* is not problematic since the program is designed to accommodate many needs and abilities. However, the presence of those few students who do not have adequate preparation does create problems in the classroom. Average grade point average for declared majors (n = 111) was 2.89 in 2004/2005 and has shown some growth since 2002. However, a specific problem that has developed over the last several years relates to the fact that other programs across campus have

increased minimum entry requirements to 2.5 or 2.75. Consequently, Exercise Science has become a "path of least resistance" for some. The students are not entering the program to meet specific professional and curricular needs but rather because it is a program that they *can* get into.

Retention rates (50% over 3 years), although similar to other programs, is substantially misleading and of questionable value in this instance. Most students do not come to Exercise Science as freshmen but rather as transfers or as a consequence of major change. To examine only the freshman "cohort" is deceptive, and fails to consider the fact that most freshmen change majors at least once in their academic careers. Exercise Science has an excellent record of degree completion for students who believe that they were underserved by other programs on campus. Also to be considered is the fact that some seniors transfer to medical programs that do not require a baccalaureate degree for entrance but award a master's degree upon completion (e.g., Medical College of Georgia-OT, Georgia State University-PT, etc). The incentives are for excellent students to collect the pre-requisites necessary for medical school and then to transfer prior to graduation. Most have chosen to remain for degree completion but some do choose that option, which reflects negatively on retention rates.

Student Learning, Satisfaction, Success. Graduate placement in jobs and professional graduate programs has been monitored informally since 1996 (See Table 2.1). Experience suggests that individuals who are professionally successful tend to be satisfied with their undergraduate preparation. Unsolicited and solicited feedback concerning program satisfaction is also collected but currently unavailable.

It is clear from the data in the following table that the Exercise Science program facilitates the movement of students without artificial impediment and without regard to race or gender. There is no evidence of a system problem in this regard.

Program Improvement. Entrance criteria are being discussed by Exercise Science faculty and administrators. It is the intent to craft entrance requirements that admit students who have the ability, motivation, and professional goals that are consistent with the mission of Exercise Science. Failure to do so will create problems in the classroom affecting many students' learning environment, as well as creating administrative problems later on.

Rating: Very Strong

Placement	Number	Comments
Graduate School	16	University of Texas-Arlington, Columbus State

(non-medical)		University, University of Tennessee, Troy State University, Florida State University
Graduate School (medical) PT, OT, PA, etc.	13	Medical College of Georgia, Georgia State University, North Georgia College and State University, University of Alabama-Birmingham, Baylor School of Medicine, Howard University, University of the South
Commissioned U.S. Army	7	Exercise Science is a significant track at CSU for those who wish to pursue military careers.
Club / Corporate Fitness	6	YMCA, Gymnastics Unlimited, Gold's Gym, etc.
Teacher / Coaching	2	One public, one private
Miscellaneous Related Occupations	11	Hospital-based cardiac rehabilitation, Hughston Clinic, health marketing
Unknown	11	Three of these opted to be homemakers and care for their children. Data are unavailable for others.

Table 2.1: Occupational / Academic Placement Exercise Science Graduates, Spring 2001 – Fall 2005

II.D. THE QUALITY OF FACULTY SUPPORTING THE PROGRAM

Adequacy of Faculty. An additional full-time faculty line was added at the beginning of the Fall Semester, 2005, which brought the number of full-time faculty to two. Two well-trained faculty is adequate to provide instruction at the undergraduate level, especially given the cross-disciplinary nature of the program. Part-time faculty have also been used to cover tow classes (one required, one elective) during the school year.

Both full-time faculty members have terminal degrees (Ph.D.) in Exercise Physiology from regionally accredited institutions. Graduate degree conferring institutions include Wake Forest University, Florida State University, Lipscomb University, and Middle Tennessee State University. Significant teaching experiences include Wake Forest University (lower division, undergraduate), Florida State University (upper division, undergraduate), Louisiana State University (graduate, master's and doctoral), Medical College of Georgia (graduate, master's), and other medical settings (B.S., Nursing). Other significant and related work experiences by the faculty include cross-country coach (Lipscomb University), cardiac rehabilitation (Wake Forest University, Louisiana State University), and, worksite wellness and fitness (Vanderbilt University). Professional affiliations include the American College of Sports Medicine, Southeastern American College of Sports Medicine, American Heart Association, and the United States Track & Field and Cross Country Coaches Association.

Faculty Development. In recent years there has been significant financial support for faculty development at Columbus State University. Also, competitive technology grants have recently been available to upgrade and enhance research capabilities. The opportunity for faculty development activities appears promising at this time.

Part-time Faculty. Part-time faculty members are selected based on the program's need for specific skills and abilities. Part-time faculty engage in orientation to the university and to the Exercise Science Program. The program coordinator supervises part-time faculty, observing teaching, soliciting student feedback, and ensuring that program quality is maintained. Part-time faculty members are evaluated by the department chair. Part-time instruction has occurred only when full-time faculty are not available or have been released for some other function. Part-time faculty members are integrated into general university functions based on their desire and motivation to participate, not as a requirement or structured component of the work experience.

Program Improvement. The exercise science faculty has an interest in developing a graduate program (M.S.). Program expansion would necessitate increasing faculty, which could be achieved most efficiently through the use of highly qualified part-time teaching assistance in the undergraduate program. It would also be necessary to work toward graduate faculty status for our newest full-time faculty member.

Rating: Very Strong

IIE. THE QUALITY OF FACILITIES AND EQUIPMENT SUPPORTING THE PROGRAM.

The Exercise Science program is "housed" in 118 Lumpkin, a modern multi-function classroom/laboratory facility. The classroom floor space is rated at a maximal capacity of 47 students. In addition, there is a dedicated laboratory space and office included in the suite.

Specialized state-of-the art ergometry (cycle, arm, treadmill, stepping), exercise test/EKG monitor, and metabolic measurement system (Moxus Modular VO2 System) is available for laboratory demonstration and basic research purposes. In addition, there is a Hitachi Multimedia LCD Projector (computer/internet-based) for instructional support.

On-campus library resources (holdings) are minimal. However, the library currently maintains a number of highly effective research database programs including ERIC, Wilson Omnifile, MEDLINE, and CINAHL. The latter two have specific relevance for Exercise Science. Interlibrary loan is available to faculty, usually without cost, for journal articles and texts for instructional or research purposes.

Program Improvement. The existing equipment is modern and state-of-the-art. However, there are other needs, particularly in view of new faculty interest/specialization and as we seek program expansion. Support for expendable supplies and small items are actually more problematic at this point than are "large ticket" items. It is our intent to seek financial support for the program throughout the university financial structure.

Rating: Very Strong

II.F. THE QUALITY OF RESEARCH AND SCHOLARSHIP SUPPORTING THE PROGRAM.

Student Research. Research, on an individual basis, has not been at the core of the Exercise Science program and has not been identified as a component of its mission. The absence of a graduate program and the heterogeneity of student interests make it difficult to design experiences that meet everyone's needs in this regard. Further, it is not clear that every student is likely to benefit from a research experience.

Every student has the opportunity to take EXSC 4331, Exercise Physiology Laboratory, and to learn techniques for the measurement of human performance, to obtain an introduction to research design, and to learn technical/scientific writing. Many students opt out of that opportunity. Students are also encouraged, and many of required due to medical/graduate prerequisites, to take MATH 1127, Introductory Statistics, a course that provides further foundation for future research.

There are a number of students each year who do choose to spend time outside of classroom assignments and to be involved in faculty research. Recently, these students have been involved with the analysis of resting and exercise metabolism, utilizing standard open-circuit indirect calorimetry. The research has focused on the metabolic derangement associated with low carbohydrate dieting.

Mentoring. Mentoring has not been an issue until this year. The faculty line provided for Exercise Science is the first new line since the inception of the program. The program coordinator for Exercise Science has been assigned to provide assistance with the new faculty member's transition and to provide professional development opportunities for him. Currently, we are planning to involve the new faculty member in the publication of existing data (development of graphs and charts appropriate for publication) and to plan a research project for the 2006 summer semester.

In the past five years there has been no published research, although publishable data exist.

Program Improvement. If meaningful faculty research and publication is to become a component of the Exercise Science program, then significant redirection of resources and philosophical reorientation must occur. Since its inception, the Exercise Science program has been essentially a one-faculty member program. The teaching load has been reasonable, given some part-time help. However, the advising load has been heavy, given the expansion of students (N=111, Fall '05) and the excessive prolongation of the registration/advising period. Although a week of advising is recognized each semester, the truth is that advising begins in earnest weeks before and extends throughout registration. In practice, advisement never ends. An open-door policy assures that every student has access to faculty and similarly assures that significant research effort is impossible. The blocks of time without interruption that is necessary for research in this field will simply not be available unless the decision is made to downgrade the importance of teaching and advising. The philosophical orientation of the program has been to emphasize teaching first, advisement second, and service third, to the detriment

of faculty research. The emphasis on advisement and the time spent with students individually is perceived to be one of two major factors in the success of the Exercise Science program over the last five years. The wisdom or philosophical reorientation is suspect.

Rating: Satisfactory

II.G. THE QUALITY OF SERVICE SUPPORTING THE PROGRAM

The Exercise Science program is supported by the Department of Counseling, Educational Leadership and Professional Studies, a department in the College of Education. The program is supported by the CELPS budget and by services throughout the university. Among services supporting Exercise Science include the library and media services, Computer Information and Networking Services, and Plant Operations.

II.H. PROGRAM HONORS AND AWARDS

Program accreditation is in the developmental stage in the American College of Sports Medicine although it is difficult to predict if and when it may become a reality. Historically, exercise scientists have preferred certification/licensure for individuals rather than programs because it focuses on what students know and are less subject to political pressures.

Rating: Satisfactory

II. I. EXCEPTIONAL ACHIEVEMENT AND HONORS OF THE PROGRAM'S STUDENTS, GRADUATES, AND FACULTY

Statistics are difficult to keep on "exceptional achievement". Feedback that comes from student intern sites, universities, and employment indicate that many of our students are truly exceptional. However, these reports are not often documented. For example, the comment was made by a supervisor at the East Alabama Medical Center that "CSU Exercise Science undergraduate students are superior to Auburn graduates". This comment was made in the presence of the Exercise Science program coordinator and the department head in Counseling, Educational Leadership, and Professional Studies. Similarly, a report came from a faculty member at the Baylor School of Medicine about the "outstanding" student that we had sent them. In this case the comment was also unsolicited and came through another faculty member in CELPS. These are not the only instances of unsolicited feedback. However, they also are not rare. This type of feedback leads us to believe that we are doing some things well.

Rating: Above Average

II. J. GENERAL SUCCESS OF THE PROGRAM'S GRADUATES

Statistics concerning employment have relied on self-report. Consequently, the record is incomplete and the statistics (percentages) could be misleading. However, in the last five years CSU Exercise Science graduates have been accepted into medical programs such as Physical Therapy (5), Physician's Assistant (3), Occupational Therapy (4), other graduate programs (9), Physical Therapy Assistant (3), other medical employment (2), corporate/club fitness (9), and commissioned by the U.S. Army (7). Universities/medical schools involved include the Medical College of Georgia, Armstrong-Atlantic State University, Georgia State University, University of Alabama-Birmingham, Baylor School of Medicine, University of Texas-Arlington, University of Tennessee, Florida State University, and the Medical School of the South. Reports from faculty indicate that in many cases these students were leaders in their cohort and not simply competitive. The acceptance of our graduates by universities and employers is the best index of program effectiveness available.

Rating: Very Strong

II. K. STAKEHOLDER SATISFACION WITH THE PROGRAM

There has been no formal survey of student, alumnus, employer, or community satisfaction with the program. Also, the concept of "stakeholder" is not as clear in Exercise Science as it is in some areas (e.g., Nursing). The informal/unsolicited feedback has been substantial and entirely positive. Letters of support were recently solicited from employers and students and they were very positive as well. Also, the high acceptance rate in graduate medical and non-medical programs is a fair proxy for program satisfaction.

Rating: Satisfactory

II. L. PROGRAM'S RESPONSIVENESS TO CHANGE AND IMPROVEMENT

Program evaluation has been an on-going process in Exercise Science since the inception of the program. An analysis of degree progress sheets will document that assertion. Rarely has a year passed when adjustments were not made to meet a specific need or to respond to changing realities.

The most significant opportunity for improvement/change in the program was made possible by the conversion from the quarter to semester format. Specifically, courses were pared and/or coalesced to provide room for a large program elective component. The reorganization of the College of Education allowed for further refinements due to the separation of Exercise Science from Health and Physical Education, and, the removal of the Exercise Science program coordinator from all teacher education functions.

The large program elective component allows for the use of courses from other schools and curricula. For instance, many students come to CSU with academic credits from many institutions. That is notably true for active military and military spouses. Students would often say, "The Army has given me two years to complete my degree. Can you

help me?" In those cases the program could absorb the course credits that the student had earned, add a strong exercise science component, and graduate the person with little or no loss of time. Students were similarly accommodated from Biology, Health, Nursing, Psychology, Business, etc. who were either disenchanted or felt disenfranchised by their previous major. Third, the program was also able to accommodate students who were interested in Physical Therapy, Occupational Therapy, Physician's Assistant, etc. In those cases students could obtain a strong exercise science core which is relevant to modern medicine and the prerequisites for medical school (math, science, physics) without adding a year to their matriculation time. In brief, the curricular changes allowed the program to accommodate individuals from many academic backgrounds, those with a variety of academic/professional interests, and varied abilities. It was at that time that the program began to expand substantially. The compressed exercise science component also allowed the program to function with minimal exercise science faculty resources.

The release of the program coordinator from Teacher Education responsibilities also provided time for academic advising. Many times students have reported that "no one has ever talked to me about my future" and expressed their appreciation for the time spent with them.

Rating: Very Strong

III. SUMMARY FINDINGS OF THE PROGRAM'S OVERALL PRODUCTIVITY

The B.S., Exercise Science is a very productive program. Currently, the program houses approximately 115 students and graduation has grown to about 20 students per academic year. These graduation statistics are superior to many traditional majors at CSU. The curriculum is very efficient, transparent, and facilitates the movement of students without artificial impediment. It is the only stand-alone Exercise Science program within the 12 sister institutions in the University System of Georgia. Students who enter as juniors have typically graduated in two years. The program is consistent with the mission of the University and is responsive to the needs of the students and the community.

III. A. ENROLLMENT OF STUDENTS IN THE PROGRAM

Upper division majors in Exercise Science in Fall 2000 was 28 (17 Juniors, 11 Seniors). That number made a substantial increase in 2001 (35%) and has grown steadily since then. Upper division enrollment in Fall 2005 was 67, which reflects a greater than 2-fold increase over Fall 2000 enrollment. Growth of majors at all levels from Fall 2000 to Fall 2004 increased by 92.1%. During that same period average growth at CSU was 41.4%. Health Science, Biology and Health & Physical Education showed a -10.9, 62.6, and 35.6% change, respectively.

Exercise Science Enrollment	2001-2002	2002-2003	2003-2004	2004-2005
2000 Courses	64	62	70	64
3000 Courses	48	36	72	66
4000 Courses	171	186	249	260

5000 Courses	40	3	6	21
Total	323	287	397	411

Table 3.1: Exercise Science Enrollment

Program Improvement. At this point the intention is to not grow larger at the undergraduate level but rather to enhance quality. Discussions are underway to implement a minimal GPA for transfer students and those who change majors.

Rating: Very Strong

III. B. ANNUAL DEGREE PRODUCTIVITY OF THE PROGRAM

The number of degrees conferred from 2001/2002 through the 2004/2005 fiscal years were 9, 13, 21, and 18, respectively. The two most recent years (2003-2005) reflect roughly a doubling of graduates from the 2001-2003 fiscal years. The numbers do not seem remarkable until you consider that the program is composed of a single full-time teaching faculty member, with minimal part-time help.

	2001-2002	**2002-2003**	**2003-2004**	**2004-2005**
Exercise Science	9	13	21	18

Table 3.2: Annual Degree Productivity for Exercise Science

Exercise Science is a highly productive undergraduate program within the College of Education, second only to Early Childhood Education in degrees awarded (FY 2004). Degree numbers are comparable or superior to Art, English Language and Literature, History, Political Science, Biology, Health Science, Psychology, Sociology, Mathematics, etc., despite having less faculty resources.

Program Improvement. The absolute number and growth of degrees awarded is appropriate.

Rating: Very Strong

III. C. PROGRAM COMPLETION EFFICIENCY AND GRADUATION RATE

There are no available data that perfectly describe the graduation *rate* or the efficiency of student's movement through the program. Retention data from Fall 2002 to Fall 2005 show that 50% of the freshman cohort were still enrolled Fall 2002. This number is similar to the university average but fails to describe retention adequately, much less program completion efficiency.

Although hard data are unavailable, it is clear that many students change major at least once. The problem with following a freshman "cohort" is that any change in major is interpreted as a failure of the program, when it fact it may represent good advising or reflect normal adjustments made by students as they learn about the university community and the opportunities available to them.

Most students come to Exercise Science as transfers and major changes. Consequently, more Exercise Science students graduated in 2004-2005 than were enrolled as freshmen four years earlier. Following freshman retention within a major is clearly difficult.

An examination of 16 Exercise Science students who were scheduled for May, 2006 commencement reinforces the points made. One student had a history of drop-out and drop-in and was excluded from the statistic. The remaining 15 had been Exercise Science majors from 12-48 months with an average of 26.9 months. These statistics were calculated from Degree Evaluation Reports which record the Catalog Term (term of entry) and the expected graduation rate. On average, Exercise Science students require little more than two calendar years to complete a degree.

Program Improvement. There is no evidence of system problem in this regard.

Rating: Very Strong

III. D. EFFICIENCY AND CLARITY OF THE PROGRAM'S COURSE REQUIREMENTS.

The core and major requirements for all majors are available in the CSU Catalog and the CSU Catalog on-line (ISIS). In addition, the Degree Evaluation Report is available on-line, and, and Exercise Science degree progress sheet that shows all requirements and all courses applied toward degree are provided to students. Exercise Science faculty have an open-door policy throughout the academic year to resolve problems or difficulties.

Program Improvement. There is no evidence of a system problem in this regard.

Rating: Very Strong

III. E. FREQUENCY AND SEQUENCING OF COURSE OFFERINGS REQUIRED FOR PROGRAM COMPLETION

All required Exercise Science courses are offered at least once annually in a fixed sequence (a course offered in the Fall will be taught every Fall). Demand for specific courses is monitored by the program coordinator and may be offered during an additional semester (often the summer) if demand warrants. The addition of a second Exercise Physiologist (Fall, 2005) has allowed for multiple sections of key courses during the same semester, which has eased scheduling problems for students and has helped resolve over-crowding in the classroom.

Scheduling has been most difficult for courses outside of Exercise Science. Human Anatomy and Physiology (BIOL 2221, 2222) has been the most problematic due to the great campus-wide demand for these courses, the preferential pre-enrollment of pre-Nursing students, and, the large percentage of students who register and then drop these courses. There is no inference of "fault" here. The Biology Department expends great resources to provide service in an area that is not required for their majors. In general, all programs on campus have been very supportive of Exercise Science student needs.

Program Improvement. Two sections of most major courses are currently being scheduled. A year of experience with the new faculty member and close monitoring of demand will be necessary to determine if further adjustment of the schedule is warranted. The Biology Department has been approving students request for transfer approval of courses from neighboring institutions, which is helping to ease the demand. Perhaps a shared-resource plan could be devised with the Biology Department so that a dedicated section of A&P could be offered.

Rating: Very Strong

III.F. ENROLLMENT IN THE PROGRAM'S REQUIRED COURSES.

Required Course Enrollment. Course enrollment has been good and experienced modest growth over the past four years (Mean = 21, 20, 26, 25, respectively, from 2001/2001-2..4-2005). Fall 2005 demand was more substantial. However, the addition of a faculty member and additional sections helped to keep class size manageable. Exercise Science was operating under a mandate to reduce class size to meet local government fire codes.

Elective Course Enrollment. Elective course enrollments are typically lower due to the fact that specific needs/interest students are targeted. Special topics courses are designed to meet the needs of higher functioning students and to enrich their academic experience. For example, Exercise Electrocardiography, (Su, 2004; N = 17) was offered for students with expectations of medical applications (Cardiac Rehabilitation, Physical Therapy, Physician's Assistant, Occupational Therapy, etc). These enrollments, however, are satisfactory to meet the cost of instruction. There has been no course dropped for low enrollment.

Program Improvement. The focus of Exercise Science is on meeting the needs of students within the financial constraints of the University. Also, fire codes prevent the overload of existing space. Currently the class enrollment numbers are satisfactory and the needs of the students are being met. Students are allowed to go off-campus for courses (Chattahoochee Valley Community College, Columbus Technical College, etc) when on-campus resources outside the department are inadequate to meet student needs.

Rating: Very Strong

III G. DIVERSITY OF THE PROGRAM'S MAJORS AND GRADUATES

Exercise Science majors (2004/2005) represent a diverse mix of students representing five foreign nations as well as those who describe their ethnic origin as Asian (2), Black (32), Hispanic (3), Multi-Racial (3), and White (68). Most students represent a more traditional-aged group (<25 years) with a sampling of older students up to age 40. Two-thirds (67%) are female. Non-white graduates during 2001/2002, 2002/2003, 2003/2004,

and 2004/2005 were 1, 5, 8, and 10, respectively, representing not only an absolute increase in number but also a significant percentage of the overall graduation numbers.

Gender	**2001-2002**	**2002-2003**	**2003-2004**	**2004-2005**
Female	36	48	63	76
Male	20	23	28	37
Ethnicity				
Asian	0	2	1	2
Black	9	16	26	32
Hispanic	2	1	0	0
Multi-Racial	0	2	1	3
White	43	48	59	68

Table 3.3 Ethnic and gender diversity among Exercise Science Majors

Most students represent a more traditional-aged group (<25 years) with a sampling of older students up to age 40. Two-thirds (67%) are female. Non-white graduates during 2001/2002, 2002/2003, 2003/2004, and 2004/2005 were 1, 5, 8, and 10, respectively, representing not only an absolute increase in number but also a significant percentage of the overall graduation numbers

Age	**2001-2002**	**2002-2003**	**2003-2004**	**2004-2005**
Under 21	14	23	25	47
21-25	33	40	51	51
26-30	6	5	13	8
31-40	3	2	2	6
41-50	0	1	0	1
51-60	0	0	0	0
Over 60	0	0	0	0
Total	39	30	24	36
Average	34.5	35.3	31.9	31.3

Table 3.4 Age diversity among Exercise Science Students

The program's success over the last four years in enrolling and graduating minority students is related in large part to University-wide initiatives. However, some early successes by minority students and subsequent "word-of-mouth" promotion with the minority community have also been significant. A third factor is that Exercise Science content matches the professional interest of a diverse group of athletes on campus, a group that represents a wide array of geographical backgrounds to include student athletes from across the nation and around the world.

Program Improvement. Exercise Science is on-track in regard to diversity goals.

Rating: Very strong

III. H. COST-EFFECTIVENESS OF INSTRUCTIONAL DELIVERY IN THE PROGRAM'S HOME DEPARTMENT

Counseling, Educational Leadership and Professional Studies (CELPS) tends to be a higher cost department ($214.00 per credit hour versus $162.15 per credit hour) than the University average. This is due in large part to the higher cost of graduate instruction. Exercise Science is the only undergraduate program in CELPS. Smaller classes demanded by accreditation standards (Counseling) tend to drive up the cost as does the fact that many faculty in CELPS were senior, experienced, ex-public school administrators that have been hired recently and who were able to negotiate higher salaries. In addition, CELPS does not offer undergraduate service classes, courses that tend to carry high enrollment and low per unit cost. Exercise Science instruction is less expensive when viewed from a per-student or per-credit hour perspective. As such, it contributes to the cost-effectiveness of the overall unit.

Please see Table 3.5 Instructional Costs for the Department of Counseling, Educational Leadership, and Professional Studies and Table 3.6 Total Instructional Costs at CSU for additional information regarding departmental costs per major and instructional costs at Columbus State University.

	2001-2002	**2002-2003**	**2003-2004**	**2004-2005**
Department Budget	$871,463	$1,193,163	$1,038,656	$977,689
Cost Per Major (M.Ed. & Ed.S. Educational Leadership and Counseling) *(Pro-Rated Expenditures/Number of Declared Majors)*	$1,823	$5,029	$2,686	$4,286
Credit Hours Taught Fall and Spring (M.Ed. & Ed.S. Secondary Education majors)	1,047	867	792	1,203
Cost per Credit (M.Ed. & Ed.S. Educational Leadership and Counseling)	$192	$690	$393	$260

Table 3.5 Instructional Costs for the Department of Counseling, Educational Leadership, and Professional Studies

	2001-2002	**2002-2003**	**2003-2004**	**2004-2005**
Instructional Costs	$23,311,457.76	$23,963,598.65	$23,784,544.59	$25,240,030.43
Total Credit Hours	116,543	133,777	148,797	155,654
Cost per Credit	$200.02	$179.13	$159.85	$162.15

Table 3.6 Total Instructional Costs at CSU

Rating: Very Strong

III. I. PROGRAM'S RESPONSIVENESS TO STATE NEEDS AND EMPLOYER DEMAND FOR PROGRAM GRADUATES.

Exercise Science is different from Nursing or Teacher Education in that the career paths are not as clear for Exercise Science. There are occupations where a B.S., Exercise Science, may be viewed as a preferential degree. However, most students are currently utilizing Exercise Science as a pre-professional degree. Exercise Science content is very appropriate for a wide range of health-related occupations and Exercise Science graduates have been embraced by professional schools. The advantage is that students from the greater Columbus area are more likely to come back and work in the region. Therefore, Exercise Science is contributing by helping to provide qualified medical and health-care for the region.

Rating: Above Average

III. J. POSITION OF THE PROGRAM'S ANNUAL DEGREE PRODUCTIVITY AMONG COMPARABLE USG PROGRAMS.

Kennesaw State University is currently the only state university in Georgia, other than CSU, that offers a coded major in Exercise Physiology (CIP, 31.0505). However, the Kennesaw State program is different in that Health Science is included with Exercise Science. Other state universities imbed exercise science as a track within teacher education programs. This is understandable given that Exercise Science evolved and developed historically from Physical Education programs.

Kennesaw State University graduated 25, 44, 31, and 33 Exercise Science/Health Science majors from 2001-2004. During that time period CSU graded 13, 13, 21, and 19. These numbers are comparable when you consider that the enrollment at KSU is better than twice that of CSU.

Program	2001-2002	2002-2003	2003-2004	2004-2005
Columbus State University	13	13	21	19
Kennesaw State University	25	44	31	33

Table 3.7 Annual Degree Productivity Relative to Other University Programs

Rating: Above Average

III.K. EXERCISE SCIENCE'S CONTRIBUTION TO ACHIEVING CSU'S MISSION

The mission of the Exercise Science program fuses with that of CSU, by design, at a minimum of four key points. Specifically, the four related goals are (1) to improve the quality of education and service to students, (2) to become a distinguished educational institution within a nationally recognized university system, (4) to encourage cultural diversity, and (6) to develop a reputation for technological innovation.

Exercise Science offers far more content at the undergraduate level than comparable (and larger) institutions nationwide. Much of the content offered at CSU is typically targeted for graduate-level instruction elsewhere. Also, the program design is remarkably

different from most institutions, maximizing and individualizing service rather than a "one-size-fits all" curriculum.

The high level of content also speaks to the #2 institutional purpose. Informal feedback from graduate institutions suggests that they are already recognizing the advanced preparation of our students.

Exercise Science has an excellent and growing record of cultural diversity (Goal #4) in terms of admission, graduation, and acceptance to graduate programs. Exercise Science students are exposed to an array of discipline-specific technology (Goal #6) that is typically not available during undergraduate instruction.

Rating: Above Average

IV. CONCLUSION ABOUT EXERCISE SCIENCE VIABILITY AT CSU

The Exercise Science Program fills a need in the immediate service area and in the region. It has the second highest annual graduation rate in the College of Education with the fewest number of full-time faculty members. Graduation numbers are similar to Kennesaw State University (on a per capita basis), which is the only state college in Georgia other than CSU that has a program vigorous enough to essentially stand alone (Kennesaw has a Health Science component).

Graduates from the program have been widely accepted into Medical Schools and other graduate programs across the nation. In the last five years there has been 16 graduates accepted to traditional graduate programs, 13 accepted to medical programs, and 7 commissioned by the U.S. Army. Nineteen students have been employed in more traditional health/fitness occupations.

Rigorous internships are required for students. These are often completed within a 250 mile radius of Columbus although individuals who are motivated can and do complete internships and other study in other states and abroad. One student from the program recently completed an internship with the United States Olympic Committee in Maine while another completed a study abroad program in London

Regular assessments of program effectiveness are conducted by faculty through feedback from graduates. Such feedback has resulted in the removal of courses, the addition of courses, and major modification of existing courses.

New courses are tested EXSC 5545 offering, Selected Topics in Exercise Science for viability. Based on data collected, adjustments are made to the course. If such a course is judged to productive and acceptable to students and faculty, then a permanent course listing is pursued through university curriculum channels. Currently, three new upper division courses are being prepared for the COE curriculum committee based on test administration during the 2003-2005 school years.

Full-time faculty members have terminal degrees (Ph.D.) in Exercise Physiology from regionally accredited institutions. Faculty have collected data for research purposes and are in the process of developing a research agenda.

V. PROGRAM IMPROVEMENT PLAN

List of Recommendations for Improving Program Quality

1. There is a need to identify minimal entrance standards for Exercise Science that does not impact diversity negatively or artificially exclude motivated students.

2. An effort to obtain more formal feedback from graduates, graduate schools, and employers are recommended to develop quantitative support for qualitative assessment.

3. An emphasis on research and publication that maximizes resources provided through professional development funding and other resources developed by faculty

4. Develop and implement an assessment system to document student learning and employer satisfaction/need

5. Develop a plan, timeline and budget to obtain program accreditation.

6. There is a need to redirect some program resources in order to carry out the research agenda begun in previous years.

Finally, the Exercise Science faculty is interested in exploring the viability of a graduate program in Exercise Science. Expertise exists for a graduate program and the development of quality graduate programs is consistent with stated university goals. Faculty are in the process of collecting data to ascertain whether a need exists for such a program.

VI. SUMMARY RECOMMENDATION: Maintain Program at Current Level

The Exercise Science program is a quality, low-cost program worthy of continued support by the university. The program provides support for students in regard to content and flexibility that is not available elsewhere on campus. Benefits to students and the community are many and available to students of all ethnic origins. Maintenance of the size of the undergraduate program with an emphasis on added quality is a goal, as is the examination of the feasibility of a Masters program.