



UNC CHARLOTTE

The University of North Carolina at Charlotte
9201 University City Boulevard
Charlotte, NC 28223-0001

May 27, 2004

Office of the Chancellor
Telephone: 704/687-2201
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Dr. Gretchen Bataille
Senior Vice President for Academic Affairs
Office of the President
University of North Carolina
Post Office Box 2688
Chapel Hill, North Carolina 27515-2688

Dear Dr. Bataille:

Enclosed are five copies of a request for authorization to establish a new Master of Science in Clinical Exercise Physiology program. This program was identified in UNC Charlotte's 2004-2009 Plan. We currently offer a clinical exercise physiology concentration in our Master of Science in Health Promotion. Creating a stand-alone clinical exercise physiology program will permit us to comply with changing national guidelines in the discipline. In addition, it will provide needed flexibility to modify the existing Master of Science in Health Promotion program. Because clinical exercise physiology is now offered as a concentration, few additional resources are required to implement the degree program.

Thank you for your consideration of this request. Provost Joan Lorden or I would be pleased to respond to any questions that you may have regarding this request.

Sincerely yours,

J. H. Woodward
Chancellor

Enclosures (5 copies)

cc: Provost Joan F. Lorden
Dean Sue Bishop
Dean Mary Lynne Calhoun
Dean Mirsad Hadzikadic
Dean Robert Johnson
Dean Ken Lambla
Dean Claude Lilly
Dean Schley Lyons
Dean Thomas Reynolds

The University of North Carolina at Charlotte

**College of Health and Human Services
Department of Kinesiology**

**Master of Science in
Clinical Exercise Physiology**

Request for Authorization to Establish

THE UNIVERSITY OF NORTH CAROLINA
Request for Authorization to Establish a New Degree Program

INSTRUCTIONS: Please submit five copies of the proposal to the Senior Vice President for Academic Affairs, UNC Office of the President. Each proposal should include a 2-3 page executive summary. The signature of the Chancellor is required.

Date: 12/18/03

Constituent Institution: The University of North Carolina at Charlotte

CIP Discipline Specialty Title: Kinesiotherapy/Kinesiotherapist

CIP Discipline Specialty Number: 51.2311 Level: B M 1st Prof

Exact Title of Proposed Program: Master of Science in Clinical Exercise Physiology

Exact Degree Abbreviation (e.g. B.S., B.A., M.A., M.S., Ed.D., Ph.D.): M.S.

Does the proposed program constitute a substantive change as defined by SACS? Yes No

a) Is it at a more advanced level than those previously authorized? Yes No

b) Is the proposed program in a new discipline division? Yes No

Proposed date to establish degree program (allow at least 3-6 months for proposal review):

month January year 2005

Do you plan to offer the proposed program away from campus *during the first year of operation*?

Yes No

If so, complete the form to be used to request establishment of a distance learning program and submit it along with this request.

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EXECUTIVE SUMMARY

The allied health professional that is trained to use exercise as a therapeutic modality is called a Clinical Exercise Physiologist. The Department of Kinesiology at UNC Charlotte has been preparing health care professionals through the Master of Science in Health Promotion's Clinical Exercise Physiology (CEP) concentration area. Enrollment in the CEP concentration area has grown substantially since its inception. The University is considering substantial changes to the Health Promotion program and these changes will make the overall M.S. program less congruent with national guidelines in Clinical Exercise Physiology. Additionally, a substantial amount of literature continues to point to a lack of activity as the primary cause of many chronic diseases and conditions as well as the therapeutic properties of appropriate exercise prescriptions for diseased populations. Therefore, the combination of increased enrollment in the CEP program, the desire to alter the overall Health Promotion degree, and the societal need for allied health professionals who have the training and credentials to prescribe appropriate exercise therapies, has resulted in this request to establish a stand-alone M.S. program in Clinical Exercise Physiology at UNC Charlotte.

The described degree program follows closely our approved concentration area in objectives, course requirements, and faculty needs. We have relied on nationally known experts in Clinical Exercise Physiology for development of the program. Whereas this proposal is requesting degree program status for an existing concentration, the proposed program requests no further faculty member resources to initially implement the program.

This new proposed degree is a specialized program in Clinical Exercise Physiology, using both an interdisciplinary and multidisciplinary approach within the College of Health and Human Services and throughout the University of North Carolina at Charlotte. This program will include in its required core two courses in the College, as well an elective list that contains nine courses from other departments in the College and University. The proposed program is unlike the traditional M.S. programs in Exercise Physiology/Science, which are based on laboratory measurement of exercise performance with athletic and general populations. In contrast, the proposed program focuses on application of exercise as a therapeutic modality for disease and pathological conditions.

Using the growth rates in the CEP concentration over the previous three years for projections, anticipated first-year enrollment in the Clinical Exercise Physiology degree program is 21 full-time and seven part-time students. Because this will be the first Clinical Exercise Physiology degree program in North Carolina, this enrollment will begin to fulfill the need for Clinical Exercise Physiologists shown by our job demand surveys.

The state of North Carolina requires that a "certified exercise specialist" be associated with each cardiac rehabilitation program in the state. The Department of Kinesiology recently conducted a survey of all North and South Carolina hospitals. The survey revealed a current job vacancy rate of 3.2 percent for Clinical Exercise Physiologists and that 39 percent of hospitals expect to add 1-4 Clinical Exercise Physiologist positions within the next two years.

Resources for this program are already in place. We currently employ two registered Clinical Exercise Physiologists, one certified and licensed Athletic Trainer, and one certified Exercise Physiologist as faculty members, all with terminal degrees. We are searching for a

tenured department chair who will be either a certified Exercise Physiologist or Athletic Trainer. Library holdings for this program have been deemed as adequate and facility space is currently available. Equipment for this program has been purchased over the past three years as we developed the concentration area, so further equipment purchases, other than supplies, are not anticipated for initial implementation of the program.

From a curriculum standpoint, this program makes extensive use of previously approved courses and curricula. Admission requirements are similar to other allied health programs at UNC Charlotte. Administratively, the Clinical Exercise Physiology M.S. program will be housed and administered within the Department of Kinesiology and College of Health and Human Services. We anticipate that this program will be fully endorsed by the governing national professional society (American College of Sports Medicine) by Fall 2004 and whereas this program will undergo regular endorsement reviews, a rigorous evaluation plan is already in place.

I. DESCRIPTION OF THE PROGRAM

A. Describe the proposed degree program (i.e., its nature, scope, and intended audience).

The proposed degree program is a Master of Science (M.S.) in Clinical Exercise Physiology (CEP). Clinical Exercise Physiologists study the wide variety of ways to use exercise as a therapeutic modality to provide benefit to humans suffering from various pathological/diseased conditions. The American College of Sports Medicine (ACSM) now recognizes Clinical Exercise Physiology as a clinical specialty and, as such, has established a national registry for Clinical Exercise Physiologists. The Clinical Exercise Physiologist program is designed to educate students in six major practice areas listed in Table 1:

Table 1 - Practice Areas for Clinical Exercise Physiology

Cardiovascular
Pulmonary
Metabolic
Musculoskeletal
Neuromuscular
Neoplastic, Immunologic, Hematologic Disorders

The degree program will prepare future Clinical Exercise Physiologists for employment in inpatient and outpatient clinical/rehabilitation settings (e.g., cardiopulmonary rehabilitation programs), general wellness/fitness commercial and corporate settings, and industrial settings that provide health care services for both diseased and healthy populations. Through a blend of classroom instruction and clinical experience, the degree program teaches a wide variety of specific health care skills, knowledge, and behaviors within each of the practice domains.

B. List the educational objectives of the program.

The proposed new degree program is a Clinical Exercise Physiology (CEP) master's degree program that will be one of the first candidates for endorsement by the American College of Sports Medicine (accreditation does not yet exist in this discipline). The Clinical Exercise Physiology degree program includes formal classroom and clinical instruction in 12 major content areas for each of the practice areas in Table 1. These 12 contents are shown in Table 2. (ACSM's Resources for Clinical Exercise Physiology, American College of Sports Medicine, 2002).

Table 2 - Content Areas/Educational Objectives of the M.S. CEP Program

Content Areas /Educational Objectives	Content Areas/Educational Objectives
1. Pathophysiology	7. Clinical Exercise Physiology
2. Aspects of the Physical Examination	8. Medical & Surgical Treatments
3. Diagnostic Techniques	9. Exercise/Fitness/Functional Testing
4. Exercise Prescription and Programming	10. Education and Counseling
5. Emergency Procedures	11. Quality Assurance/Outcome Assessment
6. Administration of Testing/Rehabilitation Programs	12. Pharmacology

Graduates from this degree program will be prepared to take the American College of Sports Medicine Registered Clinical Exercise Physiologist exam.

C. Describe the relationship of the program to other programs currently offered at the proposing institution, including the common use of: (1) courses, (2) faculty, (3) facilities, and (4) other resources.

This new proposed degree is a specialized program in allied health care utilizing both an interdisciplinary and multidisciplinary approach within the College of Health and Human Services and throughout the University of North Carolina Charlotte. The core required courses of this program will include common use of two courses in the College of Health and Human Services, as well as inclusion on the elective course list four other courses in the College's portfolio and five courses from the portfolio of the Department of Biology. Through these common and elective courses, it is anticipated that faculty outside of the administering department (Kinesiology) may be requested by students to be involved as members on project and thesis committees. Due to the laboratory nature of this program, the Clinical Exercise Physiology students would use many of the same classrooms and laboratory spaces that are currently available and used by the Department's undergraduate programs. With the exception of off-campus clinical experiences, it is not anticipated that the Clinical Exercise Physiology students will require the use of laboratories or classrooms on campus outside of the Department of Kinesiology.

II. JUSTIFICATION FOR THE PROGRAM

A. Describe the proposed program as it relates to:

1. The institutional mission and strategic plan

The University of North Carolina Charlotte is committed to liberal education in the region comprised by the ten North Carolina and three South Carolina counties that surround Charlotte. The M.S. in Clinical Exercise Physiology program will primarily focus on the Health Care and Health Policy mission of UNC Charlotte. The Clinical Exercise Physiology program will meet the mission in this area by providing both on and off campus educational opportunities and by providing research and collaborative relationships with public and private institutions in the local Charlotte metropolitan area.

The Clinical Exercise Physiology program will directly train health care providers to work in a variety of health care settings in this region.

2. **Student demand**

Student demand for this program can be measured by two parameters: 1) enrollment rate in the Clinical Exercise Physiology concentration area in the M.S. in Health Promotion program; and 2) graduate student inquiry rate.

- 1) As a result of an extensive, community focus group review and revision of the Health Promotion M.S. degree in 1999, the Clinical Exercise Physiology concentration area was established within that degree program in 2000. Table 3 shows that, in spite of the lack of any targeted marketing or promotion of this concentration area over the past 2.5 years, we have seen growth in enrollment in the Clinical Exercise Physiology concentration area.

Table 3 - Enrollment growth in the CEP concentration area

Semester	Graduate Students
Fall 2000	1
Fall 2001	8
Fall 2002	14

As can be appreciated from the table, even without marketing, enrollment has grown in this concentration area primarily through word of mouth to a level that will support a stand-alone graduate program. These enrollment figures from the Clinical Exercise Physiology concentration area indicate a healthy student demand and interest in this program.

- 2) Additionally, since the implementation of the Clinical Exercise Physiology concentration area, the numbers of inquiries that we have had regarding the Clinical Exercise Physiology concentration area have continued to increase (Table 4).

Table 4- Initial student inquiry data for Clinical Exercise Physiology

Semester	Total CEP inquiries
Fall 2000	6
Spring 2001	12
Fall 2001	15
Spring 2002	23

Taken out of context, these data are not overwhelming; however, it should be remembered that our current Clinical Exercise Physiology program is a portion of another master's degree program and that the inquiries in Table 2 reflect only the number of inquiries made by telephone and email to one of our faculty members. Information regarding total inquiries to the graduate coordinator by telephone, email, and web are not available. Additionally, as noted previously, we have had minimal marketing programs in place. For perspective, the only other program in the state that has a concentration area in CEP (Wake Forest) graduates fewer than seven students annually. Therefore, the increase in our graduate enrollment in the concentration area, the student inquiries, and the societal need for the program (discussed below) indicate that there is a demand for the program and that this demand is in line with our enrollment projections.

3. Societal need (For graduate, first professional, and baccalaureate professional programs, cite manpower needs in North Carolina and elsewhere.)

There is an oncoming wave of individuals that will enter the health care system due to a variety of disease/conditions caused by inactivity (i.e., hypokinetic diseases). Hypokinetic diseases run the gamut from obesity, cardiovascular and pulmonary diseases to metabolic disorders (e.g., diabetes) and many non-smoking forms of cancer. Recent literature has suggested that diseases, disorders, and conditions from inactivity cost the health care system \$5.7 billion per year and results in an estimated 250,000 deaths per year (Booth, et al., 2000. *J. Appl. Physiol.* 88:774-787). The use of exercise prescription and programming as a therapeutic modality to prevent and ameliorate the effects of these diseases as well as increasing quality of life is well established theoretically. Clinical Exercise Physiology is relatively new, but fills an important gap in health care because no other discipline has the training to use exercise as a therapeutic modality across the range of hypokinetic diseases and other conditions (e.g., aging, immunological disorders, neurological disorders). Considering the large Charlotte metropolitan area and the estimated numbers of individuals who have or are in the early stages of a hypokinetic disease (est. 430,000 – 850,000), the fact that there is no educational program to train Clinical Exercise Physiologists in our region needs to be remedied.

In addition to the well-established societal need for these allied health professionals, the state of North Carolina requires by law (10 NCAC 03S.1301, as authorized in G.S. 131E Article 8) that a “certified exercise specialist” be associated with each cardiac rehabilitation program in the state. A recent survey of all 225 hospitals in North and South Carolina conducted by the Department of Kinesiology found a current job vacancy rate for Clinical Exercise Physiologists to be 3.2 percent. This job vacancy rate (JVR) is similar to other allied health professions in North Carolina (e.g., rehabilitation counselor JVR = 2.2%, dietician/nutritionist = 5.6%, audiologist = 1.2%) but not as high as some fields that have been identified as having shortages (e.g., nurse practitioner = 11.9%) (Council for Allied Health in North Carolina, Raleigh, NC, 1998). Additionally, it appears that the demand for Clinical Exercise Physiologist will grow given that 39 percent of hospitals we surveyed indicated that they would be adding 1-4 Clinical Exercise Physiologist positions within the next two years. Additionally, there are numerous clinical positions available outside the Charlotte region. A quick search of the new ExerciseJobs.com job placement service showed several Clinical Exercise Physiologist positions in areas such as Massachusetts, Maryland, California, and Indiana.

In summary, there are a large number of diseases, disorders, and conditions that can be prevented and ameliorated by the application of appropriately designed exercise therapies. In the Charlotte region alone, it is estimated that in the near future, 33-66 percent of the population will suffer from a condition that can be ameliorated by exercise therapies. Furthermore, state clinical staffing regulations and the current job vacancy data for Clinical Exercise Physiologists indicate that there is a demand for these professionals.

4. Impact on existing undergraduate and/or graduate academic programs of your institution. (e.g., Will the proposed program strengthen other programs? Will it stretch existing resources? How many of your programs at this level currently fail to meet Board of Governors' productivity criteria? Is there a danger of proliferation of low-productivity degree programs at the institution?)

The new degree is a specialized program in allied health care utilizing both an interdisciplinary and multidisciplinary approach within the College of Health and Human Services and throughout the University of North Carolina at Charlotte. Specifically, this program will strengthen the graduate offerings of the University by serving a student population that is served by no educational entity in our region. Further, this program will strengthen our undergraduate programs by providing a currently unavailable opportunity for students in both the Health Fitness and Athletic Training B.S. programs to extend their education and knowledge in a discipline area similar to their baseline training.

Due to the unique multidisciplinary nature of this program, especially as it relates to the common courses, faculty, and facilities shared with the currently established Clinical Exercise Physiology concentration area, Health Fitness B.S., and Athletic Training B.S., this program will not stretch existing resources. Further, it is anticipated that current enrollment in existing graduate programs (i.e., M.S. in Nursing, M.S. in Biology) will be minimally affected. However, since the Clinical Exercise Physiology students will no longer be enrolled in the Health Promotion M.S. program, this M.S. program's enrollment will initially decrease. With the proposed changes in the Health Promotion M.S. program, it is anticipated that this enrollment decrease will be of a short-term nature.

UNC Charlotte does not have any programs classified as "low productivity" that required review by the Office of the President.

B. Discuss potential program duplication and program competitiveness

1. Identify similar programs offered elsewhere in North Carolina. Indicate the location and distance from the proposing institution. Include a) public and b) private institutions of higher education.

There are no similar programs offered elsewhere in North Carolina. The UNC Charlotte M.S. in Clinical Exercise Physiology would be the first stand-alone M.S. program in Clinical Exercise Physiology in North Carolina. It is important to note that while several institutions have M.S. programs in Exercise Science in the UNC system, there is an important distinction between these programs and the proposed M.S. program at UNC Charlotte. Traditional M.S. programs in Exercise Physiology/Exercise Science are based on laboratory-measurement of exercise performance with athletic and general populations. In contrast, we have developed our program to focus on application of exercise as a therapeutic modality for disease and pathological conditions. It should also be noted that like UNC Charlotte, Wake Forest University has a concentration area in Clinical Exercise Physiology. However, Wake Forest's Clinical Exercise Physiology concentration area is housed within an M.S. program in Exercise Science.

a) public institutions

University	Distance from UNC Charlotte
NA	NA

b) private institutions

University	Distance from UNC Charlotte
Wake Forest	80 miles

2. **Indicate how the proposed new degree program differs from other programs like it in the University. If the program duplicates other UNC programs, explain a) why is it necessary or justified and b) why demand (if limited) might not be met through a collaborative arrangement (perhaps using distance education). If the program is a first professional or doctoral degree, compare it with other similar programs in public and private universities in North Carolina, in the region, and in the nation.**

As noted above, there are no other stand-alone Clinical Exercise Physiology programs in North Carolina. Because of the underserved nature of this discipline in North Carolina, there is a strong justification for placing this program at UNC Charlotte. Charlotte is the largest metropolitan area the Carolinas. Given the population and number of health care providers, this region has both a lack of and a need for this specific degree program. The proposed degree program will not only provide direct service to private and public institutions in the Charlotte Metropolitan area and region, but will also provide a workforce to offset the regional demand for Clinical Exercise Physiologists.

A collaborative arrangement with another program is not feasible due to the clinically intensive nature of this program. Furthermore, because UNC Charlotte is in the largest metropolitan area in the region, graduates from this degree program will be exposed to a variety of clinical experiences unavailable at other institutions in the region. Therefore, the demand and the lack of another program in the region justify the establishment of this degree program at UNC Charlotte.

- C. Enrollment (baccalaureate programs should include only upper division majors, juniors, and seniors).**

Show a five-year history of enrollments and degrees awarded in similar programs offered at other UNC institutions (using the format below for each institution with a similar program); indicate which of these institutions you consulted regarding their experience with student demand and (in the case of professional programs) job placement. Indicate how their experiences influenced your enrollment projections.

As noted above, there are no universities in the UNC system that offer this degree program. Therefore, data are presented for the one non-UNC institution in the state that has this concentration area).

Institution: Wake Forest University (non-UNC system institution)
 Program Title: M.S. Exercise Science (no separate data on their Clinical Exercise Physiology concentration area)

	97-98	98-99	99-00	00-01	01-02
Enrollment	7	7	7	7	7
Degrees-awarded	7	7	6	7	7

No data on job placement (Dr. A. Marsh, personal correspondence, 2/13/03).

Use the format in the chart below to project your enrollment in the proposed program for four years and explain the basis for the projections:

	Year 1 (2005-06)	Year 2 (2006-07)	Year 3 (2007-08)	Year 4 (2008-09)
Full-time	21	26	31	36
Part-time	7	7	7	7
TOTALS	28	33	38	43

Our enrollment projections are based on our current program growth and the number of inquiries made in regards to the concentration program. The enrollment projections are also based on the addition of one tenure-track faculty position every two years.

Please indicate the anticipated steady-state headcount enrollment after four years:

Full-time 36 Part-time 7 Total 43(see comment above)

SCH production (upper division program majors, juniors and seniors *only*, for baccalaureate programs).

Use the format in the chart below to project the SCH production for four years. Explain how projections were derived from enrollment projections (see UNC website for a list of disciplines comprising each of the four categories).

The SCH production predictions in the chart below were derived by taking the enrollment projections above and multiplying them by the number of course credit hours required of each student for each year requested. Full-time graduate students were calculated at the rate of nine credit hours per semester (two semesters/year) and part-time graduate students were calculated at the rate of six credit hours per semester (two semesters/year).

Year 1	Student Credit Hours		
Program Category	UG	Masters	Doctoral
Category I			
Category II			
Category III		462	
Category IV			

Year 2	Student Credit Hours		
Program Category	UG	Masters	Doctoral
Category I			
Category II			
Category III		552	
Category IV			

Year 3	Student Credit Hours		
Program Category	UG	Masters	Doctoral
Category I			
Category II			
Category III		642	
Category IV			

Year 4	Student Credit Hours		
Program Category	UG	Masters	Doctoral
Category I			
Category II			
Category III		732	
Category IV			

III. PROGRAM REQUIREMENTS AND CURRICULUM

A. Program Planning

1. List the names of institutions with similar offerings regarded as high quality programs by the developers of the proposed program.

Virginia Tech
 The University of Florida
 University of Georgia
 Northeastern University

2. List other institutions visited or consulted in developing this proposal. Also list any consultants' reports, committee findings, and simulations (cost, enrollment shift, induced course load matrix, etc.) generated in planning the proposed program.

Consulting Institutions and Activities:

- a. American College of Sports Medicine. Endorsement program for Clinical Exercise Physiology.
- b. Virginia Tech - Dr. William Herbert (numerous communications over the past two years)
- c. ACSM Annual Meeting, Clinical Exercise Physiology Educational Standards Meeting, Seattle, WA, 2000.

B. Admission. List the following:

1. Admissions requirements for proposed program (indicate minimum requirements and general requirements).

Admission:

Admission decisions are made by the Graduate Coordinator for the Clinical Exercise Physiology program and reviewed by the Chairperson of the Department of Kinesiology. Selection into the program is competitive and satisfaction of the minimum requirements does not guarantee admission. After evaluating the credentials of all applicants meeting the minimum academic requirements, the Graduate Coordinator offers admission to students whose credentials demonstrate the highest level of academic achievement.

Students applying for admission to the Clinical Exercise Physiology program must meet the following minimum academic requirements:

- 1) Cumulative GPA of 3.0 or better in all college course work completed in the Junior and Senior year of their undergraduate program;
- 2) Successful completion (grade of C or better) of a minimum of four credit hours of Anatomy and Physiology, three credit hours of Exercise Physiology, and three credit hours of Exercise Evaluation;
- 3) Satisfactory scores on either the Graduate Record Examination (GRE) or the Miller Analogies Test (MAT).

Students transferring into UNC Charlotte must meet the above requirements. Students transferring into the Clinical Exercise Physiologist program or entering after post-baccalaureate course work may only transfer a maximum of six credit hours into the program. Before application to program, transferred courses must be approved by the student's major advisor and the graduate coordinator.

Documents to be submitted for admission (listing or sample).

The following documents will be submitted by each program applicant for admission consideration:

- 1) Graduate school application
- 2) Official agency reports of GRE or MAT scores
- 3) Official transcripts from all post secondary academic work
- 4) Three evaluations of the individual's personal and professional competencies
- 5) A Statement of Purpose from the applicant

C. Degree requirements. List the following:

1. Total hours required. Major. Minor.

A minimum of 36 semester hours will be required for graduation with the M.S. in Clinical Exercise Physiology.

2. Proportion of courses open only to graduate students to be required in program (graduate programs only).

100 percent.

3. Grades required.

In order to promote the progression of safe practitioners from one level to the next within the Clinical Exercise Physiology program and eventually into the Clinical Exercise Physiology Profession:

- a) Students must achieve a grade of *B* or better in all required Clinical Exercise Physiology courses;
- b) An accumulation of three marginal (*C*) grades will result in termination of the student's enrollment in the graduate program.
- c) If a student makes a grade of *U* on any course, enrollment will be terminated.

4. Amount of transfer credit accepted.

Students transferring into the Clinical Exercise Physiology program or entering after post-baccalaureate course work may only transfer a maximum of six credit hours into the program. Before application to the program, transferred courses must be approved by the student's major advisor and the graduate coordinator.

5. Other requirements (e.g., residence, comprehensive exams, thesis, dissertation, clinical or field experience, second major, etc.)

Students in the M.S. in Clinical Exercise Physiology program will also complete either a Thesis or a Comprehensive Exam and additional practicum hours as a capstone experience under the supervision of a graduate faculty member within the Department of Kinesiology. Additionally, the students will complete at least 600 hours of clinical

education during the course of the program. Those completing 1,200 hours will sit for the ACSM Registered Clinical Exercise Physiologist Exam.

The written comprehensive examination covers the following core areas: cardiovascular, pulmonary, metabolic, musculoskeletal, neuromuscular, and immunology. The examination is given three times a year in April, July, and November. The comprehensive exam is taken after completion of 30 credit hours and approval of the student's faculty advisory committee. A student is allowed to repeat the examination only once. Failure on the comprehensive examination a second time results in the student's removal from the program.

6. Language and/or research requirements.

Each student must have English language proficiency. If the student uses English as a second language, they must meet the minimum University requirement of at least 220 on the computer-based TOEFL test.

7. Any time limits for completion.

Candidates must complete all requirements for the master's degree in Clinical Exercise Physiology, including accepted transferred credit, within six years of the end of the first semester in which they registered in the Graduate School

D. List existing courses by title and number and indicate (*) those that are required. Include an explanation of numbering system. List (under a heading marked "new") and describe new courses proposed.

Required Courses to be completed (27 Credit Hours):

- *KNES 6120 Advances in Clinical Exercise Physiology (3 credit hours)
- *KNES 5134 Advanced Exercise Testing and Prescription (3)
- *KNES 6280 Advanced Exercise Physiology (3)
- *KNES 6121 Clinical Practice in Exercise Physiology (3)
- *NURS 6160 Research Methods in Health Professions (3)
- *KNES 5292 Advanced Athletic Training (3)
- *KNES 5232 Physiology of Human Aging (3)
- *KNES 6285 Advanced Cardiopulmonary Physiology (3)
- *KNES 6490 Advanced Practicum in Clinical Exercise Physiology (1) (taken at least 3 times)

*Capstone Experience (required to complete one of two options)

OPTION A - KNES 6900 Graduate Thesis (3)

OPTION B - KNES 6490 Advanced Practicum in CEP (1) (taken for an additional 3 credits)

AND satisfactory completion of comprehensive examination

Elective Courses (At Least 6 Credit Hours):

- KNES 6899 Special Topics in Exercise Physiology (3)
- KNES 6469 Directed Independent Study (3)
- HLTH 6143 Behavior Change in Health Promotion (3)
- HLTH 5299 Epidemiology (3)
- HLTH 6222 Health Promotion Analysis (3)
- BIOL 5199 Molecular Biology (3)
- BIOL 5171 Cell Physiology (3)
- BIOL 6050 Advanced Human Physiology (Special Topics) (3)

BIOL 6050	Pathophysiology (Special Topics) (3)
BIOL 5260	Population Genetics (3)

New courses to be established

KNES 6120	Advances in Clinical Exercise Physiology (3 credit hours)
KNES 6285	Advanced Cardiopulmonary Physiology (3)
KNES 6490	Advanced Practicum in Clinical Exercise Physiology (1)
KNES 6121	Clinical Practice in Exercise Physiology (3)
KNES 6469	Directed Independent Study (3)

IV. FACULTY

- A. List the names of persons on the faculty who will be directly involved in the proposed program. Provide complete information on each faculty member's education, teaching experience, research experience, publications, and experience in directing student research, including the number of theses and dissertations directed for graduate programs. The official roster forms approved by SACS can be submitted rather than actual faculty vita.**

While other faculty will be involved in teaching courses in this program (especially those courses outside of the Department of Kinesiology), the following faculty will be directly involved in the proposed program within the Department of Kinesiology.

Faculty Member Name	Position	Other Degrees and Institutions
Dr. J. Timothy Lightfoot	Ph.D., Exercise Physiology University of Tennessee	M.Ed., Physical Education Northeast Louisiana University
Dr. Jolene Henning	Ed.D., Higher Education Ball State University	M.S., Athletic Training University of Virginia
Dr. Michael Turner	Ph.D. Exercise Physiology University of Tennessee	M.S., Exercise Physiology Miami University
Dr. Alan Jung	Ph.D., Exercise Physiology University of Alabama	M.S., Exercise Physiology Appalachian State University
TBD	Professor and Chair (7/1/04)	

- B. Estimate the need for new faculty for the proposed program for the first four years. If the teaching responsibilities for the proposed program will be absorbed in part or in whole by the present faculty, explain how this will be done without weakening existing programs.**

This program is currently instituted as a concentration area within another graduate degree program (Health Promotion). The faculty currently teaching within this concentration area primarily teach Clinical Exercise Physiology and thus, no change in teaching responsibilities is anticipated. We are currently searching for another faculty

member which will allow the appropriate coverage of the two new lecture courses required to begin the program.

It is anticipated that as the program grows and external research funding increases, additional tenure-track lines will be needed. Specifically, it is anticipated that at least one additional line will be needed within 1-2 years of implementation of this program.

C. If acquisition of new faculty requires additional funds, please explain where and how these funds will be obtained.

NA

D. Explain how the program will affect faculty activity including course load, public service and scholarly research.

Faculty activity will not be affected by this new program. Course load, scholarly research, and public service requirements will continue to be governed by current departmental and college policies.

V. LIBRARY

A. Provide a general statement as to the adequacy of present library holdings for the proposed program.

See attached letter. The present library holdings have been deemed adequate.

B. State how the library will be improved to meet program requirements for the next five years. The explanation should discuss the need for books, periodicals, reference materials, primary source materials, etc. What additional library support must be added to areas supporting the proposed program?

The Graduate Coordinator of the Clinical Exercise Physiology program will monitor the status of the library holdings and will make recommendations to the Library for other books, periodicals, reference materials, or primary source materials needed over the next five years. This system has adequately maintained the current degree programs in our college.

C. Discuss the use of other institutional libraries.

Other institutional libraries will be used for InterLibrary Loan if the UNC Charlotte Library does not possess particular material.

VI. FACILITIES AND EQUIPMENT

A. Describe facilities available for the proposed program.

Facilities available for the proposed program are the following:

1. Classroom Space.
 - a) Belk Gym 227 – Classroom designed for 50 students.
 - b) Belk Gym 229 – Auditorium designed for 212 students.
 - c) Belk Gym 232 – Classroom designed for 25 students.
 - d) Belk Gym 045 – Classroom designed for 35 students
2. Classroom / Lab Space.
 - a) Belk Gym 026 – Lab space of approximately 800 square feet dedicated to athletic training educational programming. Skills in various areas of athletic training/muscle and skeletal rehabilitation are taught and practiced in this space.
 - b) Belk Gym 240L – Lab space of approximately 2000 square feet dedicated to exercise physiology research and teaching. Skills in various areas of clinical exercise physiology are taught and practiced in this area.
3. Specialized Lab / Activity Spaces.
 - a) Belk Gym Pool – used for aquatic therapy lab instruction.
 - b) Belk Gym and Barnhardt Student Activities Center Weight Rooms – used for strength and conditioning lab instruction.
4. Locker Space.
 - a) Belk Gym men’s and women’s locker rooms. Dedicated lockers for approximately 32 persons in the program.
5. Off-campus Clinical Education sites.
 - a) Affiliated Clinical Exercise Physiology care facilities at medical and general health institutions in the greater Charlotte area.
 1. Miller Orthopedic Clinics
 2. Carolinas Medical Center
 3. NorthEast Medical Center
 4. Several YMCA branches (e.g., University City YMCA)

B. Describe the effect of this new program on existing facilities and indicate whether they will be adequate, both at the commencement of the program and during the next decade.

Existing facilities will be adequate at the commencement of the program. However, due to anticipated national standard modifications, it is anticipated that an upgrade/expansion of the classroom/lab facilities will be needed over the next decade. Preliminary expansion plans have already been developed to improve the existing space.

C. Discuss any information technology services needed and/or available.

Not applicable

D. Discuss sources of financial support for any new facilities and equipment.

Financial support for new facilities and equipment will continue to be supported by the operating budgets of the Department of Kinesiology. Whereas this program has been a concentration area under the Health Promotion program which was contained with the Department of Kinesiology until recently, it is not anticipated that additional financial support will be needed to conduct this program.

VII. ADMINISTRATION

Describe how the proposed program will be administered giving the responsibilities of each department, division, school, or college. Explain any inter-disciplinary or inter-unit administrative plans. Include an organizational chart showing the “location” of the proposed program.

The proposed program will be administered under the Department of Kinesiology within the College of Health and Human Services. The program will be directed by the Graduate Coordinator who will be appointed by and report directly to the Chair of the Department of Kinesiology.

VIII. ACCREDITATION

Indicate the names of all accrediting agencies normally concerned with programs similar to the one proposed. Describe plans to request professional accreditation. It the proposed new degree program is at a more advanced level than those previously authorized or if it is in a new discipline division, was SACS notified of a potential “substantive change” during the planning process? If so, describe the response from SACS and the steps that have been taken to date with reference to the applicable procedure.

At this time, there is no national accreditation program for Clinical Exercise Physiology. However, there is a set of national educational guidelines and the American College of Sports Medicine is instituting an "endorsement" program which is anticipated to be converted into an accreditation program over the next decade. Part of the implementation plan is to seek national endorsement of the program from the American College of Sports Medicine and subsequently, when available, to seek accreditation.

IX. SUPPORTING FIELDS

Are other subject-matter fields at the proposing institution necessary or valuable in support of the proposed program? Is there needed improvement or expansion of these fields? To what extent will such improvement or expansion be necessary for the proposed program?

Within our institution, the primary supporting fields for this new program are the B.S. degrees in Health Fitness and Athletic Training. The Clinical Exercise Physiology program is designed to extend and expand the knowledge of those two undergraduate programs. Given the recent extensive revisions of the Health Fitness program to meet national standards and the recent implementation and accreditation process of the Athletic Training program, we do not foresee a necessary improvement or expansion of the Health Fitness program or other courses to support the proposed degree program.

X. ADDITIONAL INFORMATION

Include any additional information deemed pertinent to the review of this new degree program proposal.

XI. BUDGET

Provide estimates (using the attached form) of the additional costs required to implement the program and identify the proposed sources of the additional required funds. *Use SCH projections (section II.C.) to estimate new state appropriations through enrollment increase funds.* Prepare a budget schedule for each of the first three years of the program, indicating the account number and name for all additional amounts required. Identify EPA and SPA positions immediately below the account listing. New SPA positions should be listed at the first step in the salary range using the SPA classification rates currently in effect. Identify any larger or specialized equipment and any unusual supplies requirements.

For the purposes of the second and third year estimates, project faculty and SPA position rates and fringe benefits rates at first year levels. *Include the continuation of previous year(s) costs in second and third year estimates.*

Additional state-appropriated funds for new programs may be limited. Except in exceptional circumstances, institutions should request such funds for no more than three years (e.g., for start-up equipment, new faculty positions, etc.), at which time enrollment increase funds should be adequate to support the new program. Therefore it will be assumed that requests (in the “New Allocations” columns of the following worksheet) are for one, two, or three years unless the institution indicates a continuing need and attaches a compelling justification. However, funds for new programs are more likely to be allocated for limited periods of time.

See Appendix F for the budgetary estimates for this program (to be completed by Academic Affairs).

XII. EVALUATION PLANS

All new degree program proposals and degree program track descriptions must include an evaluation plan which includes: (a) the criteria to be used to evaluate the quality and effectiveness of the program, (b) measures to be used to evaluate the program, (c) expected levels of productivity of the proposed program/track for the first four years of the program (numbers of graduates), (d) the names, addresses, and telephone numbers of at least three persons...qualified to review this proposal and to evaluate the program once operational, and (e) the plan and schedule to evaluate the proposed new degree program prior to the completion of its fifth year of operation once fully established.

A. Criteria to be used to evaluate the proposed program (not in an order of priority).

The following criteria will be used to evaluate the proposed program:

1. At least 85% of the entering students will successfully complete the program
2. At least 90% of the graduating students that take the national registry exam or an appropriate certification exam will pass.
3. At least 90% of the graduating students will be placed into either graduate programs or jobs upon passage of national registry and/or certification exams.

B. Measures to be used to evaluate the program:

The following measures will be used to evaluate whether the program has met the criteria outlined:

1. At least 85% of the entering students will successfully complete the program
 - The number of students accepted into the program and ultimately completing the program by graduating from the program will be measured to determine whether this criterion is met.
2. At least 90% of the graduating students that take the national registry exam or an appropriate certification exam will pass.
 - The number of graduating students who take and subsequently pass either the national registry exam (ACSM RCEP) or ACSM Exercise Specialist exam will be reported to UNC Charlotte and will be used to determine whether this criterion is met.
3. At least 90% of the graduating students will be placed into either graduate programs or jobs upon passage of national boards and state licensure exams.
 - Initial placement of graduates from this program will be tracked to determine:
 - a) the number of students taking jobs in Clinical Exercise Physiology or related health care professions; or
 - b) the number of students continuing their education in doctoral Clinical Exercise Physiology or related health care professional programs.

C. Projected productivity levels (numbers of graduates):

	Year 1 (2004-2005)	Year 2 (2005-2006)	Year 3 (2006-2007)	Year 4 (2007-2008)	TOTALS
B					
M	14	14	17	19	64
I/P					
D					

D. Recommended consultants/reviewers: Names, titles, addresses, e-mail addresses, and telephone numbers. May not be employees of the University of North Carolina.

Dr. William Herbert
 Professor
 Department Human Nutrition, Foods & Exercise
 Virginia Tech
 501 Floyd St.
 Blacksburg, VA 24060
 (540) 231-6565
 wgherb@vt.edu

Dr. William J. Gillespie
Chair
Department of Cardiopulmonary Science
Northeastern University
360 Huntington Ave.
Boston, MA 02115
(617) 373-5695
w.gillespie@neu.edu

E. Plan for evaluation prior to sixth operational year.

1. At the start of the fifth year of the program, a formal evaluation of the Clinical Exercise Physiology program will commence. This evaluation will consist of the following components:
 - a) An external consultant will be recruited to evaluate the Clinical Exercise Physiology program in light of the national accreditation standards in place at the time;
 - b) Progress within the national endorsement process. By five years into the program, the program should have been fully endorsed for four years;
 - c) Data from the national registry and certification exams;
 - d) Data regarding student placement upon graduating;
 - e) Data regarding student completion success.
2. An evaluation committee will be formed by the Chair of the Department of Kinesiology. This committee will consider the data compiled and report to the Dean of the College of Health and Human Services their evaluation of the program.


XIII. REPORTING REQUIREMENTS

Institutions will be expected to report on program productivity after one year and three years of operation. This information will be solicited as a part of the biennial long-range planning revision.

Proposed date of initiation of proposed degree program: January 1, 2005

This proposal to establish a new program has been reviewed and approved by the appropriate campus committees and authorities.

Chancellor



APPENDIX A: PROPOSAL SUMMARY AND PROPOSED CATALOG COPY

A. PROPOSAL SUMMARY AND CATALOG COPY.

1. SUMMARY.

The Department of Kinesiology proposes to establish a Master of Science degree in Clinical Exercise Physiology using previously approved graduate level courses in the department, in addition to five new courses outlined below. This proposal follows extensive planning and curriculum development over the past two years (see Appendix 1 for the complete curriculum and course rotations for this program).

2. PROPOSED CATALOG COPY FOR PROGRAM.

MASTER OF SCIENCE IN CLINICAL EXERCISE PHYSIOLOGY

The Master of Science in Clinical Exercise Physiology is designed to prepare students to become Registered Clinical Exercise Physiologists. Clinical Exercise Physiologists are employed in inpatient and outpatient clinical/rehabilitation settings (e.g., cardiopulmonary rehabilitation programs), general wellness/fitness commercial and corporate settings, and industrial settings that provide health care services for both diseased and healthy populations. Through a blend of classroom instruction and clinical experience, the degree program teaches a wide variety of specific health care skills, knowledge, and behaviors within the cardiovascular, pulmonary, metabolic, musculoskeletal, neuromuscular, and immunologic practice areas. Students will be required to complete a 30 credit hour core of classes and an additional six credit hours of electives.

A complete sequence of courses can be found at <http://www.health.uncc.edu/knes>

3. PROPOSED CATALOG COPY FOR NEW COURSES IN PROGRAM:

a. Proposed catalog copy for Advances in Clinical Exercise Physiology (KNES 6120)

KNES 6120. Advances in Clinical Exercise Physiology. (3) This course introduces students to concepts and topics associated with Clinical Exercise Physiology, including areas of practice in Clinical Exercise Physiology and professional development. *(Fall)*

b. Proposed catalog copy for KNES 6285 – Advanced Cardiopulmonary Physiology

KNES 6285. Advanced Cardiopulmonary Physiology. (3) This course is designed to develop a thorough understanding of cardiovascular physiology, ECG interpretation, and health-related applications. This course examines in detail the various parameters of the cardiovascular system, the implication of disease and structural abnormalities to these parameters, and the relationship of cardiovascular function to exercise adaptation. Emphasis will be placed on use of the information in the clinical setting. *(Spring)*

- c. Proposed catalog copy for Clinical Practice in Exercise Physiology (KNES 6121)

KNES 6121. Clinical Practice in Exercise Physiology. (3) Knowledge and skills required in the clinical setting including operational standards, examination of current drug therapies, and legal and social considerations related to practice as a Clinical Exercise Physiologist. *(Fall)*

- d. Proposed catalog copy for Advanced Practicum in Clinical Exercise Physiology (KNES 6490)

KNES 6490. Advanced Practicum in Clinical Exercise Physiology. (1) Acquisition and application of knowledge, skills, and abilities necessary for the Registered Clinical Exercise Physiologist while gaining experiential hours in an appropriate clinical setting. Three (3) credit hours of Advanced Practicum are required for graduation; this course may be repeated for up to six credit hours. *(Fall, Spring, Summer)*

- e. Proposed catalog copy for Directed Independent Study (KNES 6469)

KNES 6469. Directed Independent Study. (1-3) Directed study in areas of specialization in Clinical Exercise Physiology and related fields. Offered on a *Pass/No Credit* basis only. *(Fall, Spring, Summer)*

APPENDIX B: LIBRARY CONSULTATION REPORTS



Consultation on Library Holdings

To: Mike Turner
From: Judy Hathway
Date: Dec. 10, 2003
Subject: KNES 6120 Advances in Clinical Exercise Physiology

Summary of Librarian's Evaluation of Holdings:

Evaluator: Judy Hathway _____ **Date:** Dec. 10, 2003__

Check One:

- 1. Holdings are superior _____
- 2. Holdings are adequate XX
- 3. Holdings are adequate only if Dept. purchases additional items. _____
- 4. Holdings are inadequate _____

Comments:

This course covers relatively new areas in the young clinical exercise physiology area. This means that monographic materials are not really available yet, with the most literature sources being in the journal literature. The projects as outlined in the Fall 2002 course syllabus are cutting edge, actually contributing the base materials for the discipline. The Library's access to electronic journals as well as the current journal print collection are adequate to support this course.

Judith Hathway

Evaluator's Signature

Dec 10, 2003

Date

OAA jdp



UNC CHARLOTTE
J. Murrey Atkins Library

Consultation on Library Holdings

To: Mike Turner
From: Judy Hathway
Date: Dec. 10, 2003
Subject: KNES 6121 Clinical Practice in Exercise Physiology

Summary of Librarian's Evaluation of Holdings:

Evaluator: Judy Hathway _____ Date: Dec. 10, 2003__

Check One:

- 1. Holdings are superior _____
- 2. Holdings are adequate XX
- 3. Holdings are adequate only if Dept. purchases additional items. _____
- 4. Holdings are inadequate _____

Comments:

This course holds elements in common with areas in the nursing curriculum already adequately supported by the Library. Other topics are covered adequately in our government documents collections. Clinical exercise physiology is a relatively new field with much of the discipline specific information contained only in the journal literature. We have access to Science Direct and the NCLive full text databases which should give adequate access and InterLibrary Loan is available to both faculty and students in this class as a backup. The Library is adequately situated to support this course.

Judith Hathway

Evaluator's Signature

Dec 10, 2003

Date



Consultation on Library Holdings

To: Mike Turner
From: Judy Hathway
Date: Dec. 10, 2003
Subject: KNES 6285 Advanced Cardiopulmonary Physiology

Summary of Librarian's Evaluation of Holdings:

Evaluator: Judy Hathway _____ **Date:** Dec. 10, 2003__

Check One:

- 1. Holdings are superior _____
- 2. Holdings are adequate XX
- 3. Holdings are adequate only if Dept. purchases additional items. _____
- 4. Holdings are inadequate _____

Comments:

Our current library holdings are adequate to support the start up of this course with new materials recently purchased in the area. We will need to beef up the collections with more current materials in the specific areas covered to support the expected growth in the clinical exercise physiology program in the next 5 years.

Judith Hathway

Evaluator's Signature

Dec. 10, 2003

Date



Consultation on Library Holdings

To: Mike Turner
From: Judy Hathway
Date: Dec. 10, 2003
Subject: KNES 6469 – Directed Independent Study

Summary of Librarian's Evaluation of Holdings:

Evaluator: Judy Hathway _____ **Date:** Dec. 10, 2003__

Check One:

- 1. Holdings are superior
- 2. Holdings are adequate _XX_
- 3. Holdings are adequate only if Dept. purchases additional items. _____
- 4. Holdings are inadequate _____

Comments:

The Library resources to support this course are dependent on the topics chosen. In addition to print and electronic Library resources, students in this directed studies course have access to InterLibrary Loan through the Library to help them in researching their individual topics.

Judith Hathway

Evaluator's Signature

Dec. 10, 2003

Date


UNC CHARLOTTE
J. Murrey Atkins Library

Consultation on Library Holdings

To: Mike Turner
From: Judy Hathway
Date: Dec. 10, 2003
Subject: KNES 6490 Practicum in Clinical Exercise Physiology

Summary of Librarian's Evaluation of Holdings:

Evaluator: Judy Hathway _____ **Date:** Dec 10, 2003__

Check One:

- 1. Holdings are superior
- 2. Holdings are adequate XX
- 3. Holdings are adequate only if Dept. purchases additional items. _____
- 4. Holdings are inadequate _____

Comments:

This is a clinical practicum requiring no additional library resources beyond those for the courses which the practicum supports. Those courses have adequate holdings in the Library.



Evaluator's Signature



Date

APPENDIX C: LETTERS OF ENDORSEMENT



College of Health and Human Services
9201 University City Boulevard
Charlotte, NC 28223-0001

Department of Health Behavior and Administration
704/687-2957
Fax 704/687-6122

January 2, 2003

Tim Lightfoot, PhD
Chair and Professor
Department of Kinesiology

Dear Dr. Lightfoot:

Thank you for sharing your graduate curriculum proposal, "Establishment of a Master of Science Degree in Clinical Exercise Physiology." We are pleased to endorse without reservation your intentions to implement a new degree program that relates to an especially relevant health-related niche (i.e., hypokinetic diseases). The degree program you plan to establish will not only serve to meaningfully increase the repertoire of master's degree programs currently offered by the Graduate School, but also contribute significantly to an expanding range of graduate degree programs available in the College of Health and Human Services.

We appreciate that you have kept us intimately informed of your plans over the previous two years, and that you shared previously with us both your Feasibility Study (December 19, 2002) and your Request for Authorization to Plan a New Degree Program (January 8, 2003).

I have only two technical notes to offer for your consideration. First, students will be required to earn three credit hours of one new course, KNES6490, Advanced Practicum in Clinical Exercise Physiology. I recall from my days in the Graduate School that it was frequently a challenge to list, independently, multiple occurrences of a "repeated course" on the official transcript. To that end, I wonder if there is a need to create KNES6491, 6492, and 6493.

Second, as we enter a "catalog year" there might be value in including, at this stage, a more exhaustive "catalog copy" of your proposed program to include program faculty, admission requirements, etc. Relatedly, you might also consider including, as part of a larger exercise, the "catalog copy" for the Graduate Certificate in Clinical Exercise Physiology to the Department of Kinesiology's overall description of program offerings. As you know, that change has already occurred implicitly at the level of the Graduate School.

Good luck in all ways with the proposal, Tim. We look forward to our continued interdepartmental interactions, both in the short-term as we enter a period of transition in our shared programmatic growth and development, and in the long-term as we enable the mutual success of students enrolled in increasingly independent programs of study.

Sincerely,


Andrew Harver
Chair and Professor
Department of Health Behavior and Administration

MEMORANDUM

To: Tim Lightfoot, Ph.D.
Professor
Chair, Kinesiology Department

From: Anne Hakenewerth, M.S.
Director of Health Informatics

Date: January 6, 2004

Re: New M.S. in Clinical Exercise Physiology degree program

I have reviewed the proposed curriculum for the Master of Science in Clinical Exercise Physiology, and have determined that our existing audiovisual projection capabilities, as well as computer lab software and hardware, are adequate to support the proposed program.

APPENDIX D: NEW COURSE SYLLABI

Course Syllabus
Department of Kinesiology
College of Health and Human Services
KNES 6120 - Advances in Clinical Exercise Physiology
(3 credits)

Catalog Copy

KNES 6120. Advances in Clinical Exercise Physiology. (3) This course introduces students to concepts and topics associated with Clinical Exercise Physiology, including areas of practice in Clinical Exercise Physiology and professional development. *(Fall)*

Rationale

The purpose of this course is to introduce students to concepts and topics associated with Clinical Exercise Physiology.

Course Objectives

Upon completion of the course, the student will understand:

- 1) The professional and disciplinary underpinnings of Clinical Exercise Physiology;
- 2) The development of Clinical Exercise Physiology's body of knowledge;
- 3) Regional implementation of national guidelines for Clinical Exercise Physiology;
- 4) The appropriate application of exercise therapy to emerging diseases/conditions.

University Policies

Academic Integrity

Students have the responsibility to know and observe the University Regulations of Student Conduct. In particular, each student has the responsibility and duty to fully understand what plagiarism is and what constitutes proper citation style when referencing other works. Instances of plagiarism will be dealt with severely and fully according to the University Code of Conduct and the Department of Kinesiology guidelines. **You are required to complete the online Plagiarism Tutorial at <http://www.health.uncc.edu/knes> before you will be given a grade in this class.

Disabled Students

If you have a diagnosed disability, you need to check in with the Office of Disability Services in 230 Fretwell.

Grading

Midterm	100 points	300 Total Points
Final Exam	100 points	270-300 = A
Presentation and Paper	100 points	240-269 = B
		210-239 = C

Class Requirements (i.e., what you do for a grade)

A. Exams We will have two exams, a mid-term and final. The exams will be take-home exams that focus on “real-world” problems that Clinical Exercise Physiologists face. The exams will force you to apply the concepts you’ve learned to develop solutions.

B. Team Projects

Large projects in the work environment are often assigned to teams of professionals. We will be no exception because we have three large projects that need to be completed. These projects are unique in that they are not just educational exercises, but will actually result in a product that will be useful to the discipline. Therefore, the standard of acceptance for these projects will be higher than what you may be used to. However, because of this higher standard, this team project will be the only out-of-class project in this class (i.e., no other term papers, writings, etc.).

How these projects will work:

- a. I will assign three teams
- b. Each team will make a 'pitch' for the project they want
- c. Each team will be assigned a project
- d. Each team will present updates on their project throughout the semester
- e. Each team will do a final presentation on the last class day in front of a panel of experts. Part of the final presentation will be a written report and synopsis.

How I will assign teams: I will assign the teams through a combination of student seniority and random assignment. I will make sure that there is at least one “experienced” graduate student on this team, and then will randomly assign the rest of the students to the teams. Whereas you are all professionals, I expect each team to self-police group behavior, including individual participation, meeting attendance, etc. Only in extreme cases will I get involved....and if I do have to get involved....

The Pitch: On the second class night, each group will make a pitch for the team project they wish to complete. Your team will need to notify me by email which project you are pitching for no later than 4 pm on the day of the pitch.

When making your pitch, suffice it to say that your group needs to be persuasive. I would assume that your pitch would cover things such as why your group is especially suited to complete this project, an early idea(s) about how you are going to complete the project, and any other reasons that might tilt the decision in your direction. While I will ask for input from the class, I will make the final decision and notify everyone via email on the day after the pitch session.

One last note: Your pitch session is limited to 15 minutes. (Be smart about this....)

Team Project Updates - Spaced approximately evenly throughout the semester are two team project updates. During these times, your team should give a thorough update on the progress on your project. These updates should include actions taken, results seen, research found, challenges met and unmet, etc. These updates should be thorough and should show that your team is making progress toward the completion of your project.

Final Team Project Presentation - Your team project presentation should be a thorough 30-minute overview of your project. How your team does this presentation is up to you. The only guidelines are that the presentation can be absolutely no longer than 30 minutes (I will cut you off) and you must use good presentation skills (e.g., proper attire, good speaking skills, audio-visuals, etc.). The final presentations will be on the last class day and will take place in front of a panel of experts who will help me judge the merit of each completed project.

The Projects - Below are three projects that are critical to Clinical Exercise Physiology in our region. If there are only two teams, you must pick one of the first two projects (with three teams, you can pitch for any of the three). Completion of these projects may result in publication, fame, or infamy, so your final product will need to conform to the highest possible standards....

Project 1 - Development of job vacancy rates for Clinical Exercise Physiologists - Part of most allied health disciplines, these data, the vacancy rates available for filling by professionals in the field, are used in many critical decisions. In particular, job vacancy rates are used extensively by educational institutions to justify establishment of new programs, elimination of others, and to get a sense of where certain disciplines are going. In North Carolina, the largest developer of Job Vacancy Rates (JVR) is the state AHEC. However, Clinical Exercise Physiology has been left out of these surveys repeatedly and thus, we have no JVR for CEP.

Therefore, this project will entail developing JVR for CEP for our region. This region should include North Carolina and South Carolina and if possible, provide some insight as to national JVR. Some ready sources may be the American Association for Cardiovascular and Pulmonary Rehabilitation (AACVPR), the Hospital Fitness Association, the American College Health Care Executive, as well as other sources. Further, the Department of Kinesiology will defray the cost of any surveys or measurement that need to be completed (the expenses must be approved by Dr. Lightfoot before they are undertaken!).

Project 2 - Disciplinary Infrastructure - As you work in a health-care setting, it is striking that each discipline has an extensive infrastructure that promotes and protects the discipline. CEP, being a fairly young discipline, is struggling to put its infrastructure in place.

Therefore, this project will entail comparing and contrasting CEP's disciplinary infrastructure with a range of other allied health disciplines. Furthermore, this project should include suggestions for necessary state CEP infrastructure, as well as a detailed plan for establishment of this infrastructure (the completion of a few steps on this plan wouldn't hurt either!). Again, the Department will defray the cost of any expenses for this project (the expenses must be approved by Dr. Lightfoot before they are undertaken!).

Project 3 - Disciplinary Marketing - CEPs are virtually unheard of (think of Rodney Dangerfield). Much of this is due to our fairly late arrival to the allied health scene and the reluctance of some of our professional organizations to get involved in disciplinary matters (aka: ACSM).

Therefore, this project will entail developing and beginning the implementation of a marketing plan to establish and elevate the image of CEPs regionally. We want every facility to think that they need to hire a CEP. The team that does this project needs to carefully consider the target audience and if that targeted audience will change over time.

Required Text

There is no required text for this class. However, supplemental material will be drawn from several recommended texts. In particular, ACSM's Exercise Management for Persons with Chronic Diseases and Disabilities, Human Kinetics, 1997 (ISBN:0-87322-798-0) will be used.

Class Schedule - The following schedule is a guide to let you know about when we will be covering specific topics in class. The only items that are absolute are the test and presentation dates. Plan accordingly.

<u>Date</u>	<u>Item/Topic</u>
8/19/02	- Introduction to Class & Discipline / Project Team Assignments
8/26/02	- Project Pitches/History, Organizations, Progress, Certification, Registration, & Licensure
9/2/02	- Labor Day - No Class
9/9/02	- CEP Standards of Practice
9/16/02	- Necessary elements of cardiovascular/pulmonary rehab / Team Project Update
9/23/02	- First Field Trip - CMC (5 pm - 7 pm)
9/30/02	- Holistic management of Cardiovascular/Pulmonary Rehab
10/7/02	- Working with other Health Care Team members
10/14/02	- Midterm Exam
10/21/02	- Field Trip #2 - Cabarrus Health Initiative (5 pm - 7 pm)
10/28/02	- The CEP in other settings (Guest Lecturer: Scott McDoniel) / Team Project Update
11/4/02	- New areas - Immunological diseases - Exercise Testing/Prescription
11/11/02	- New areas - Neuromuscular Disorders - Exercise Testing/Prescription
11/18/02	- New areas - Pulmonary Disorders - Exercise Testing/Prescription
11/25/02	- Field Trip #3 - Northeast Medical Center
12/2/02	- Panel of experts discussion (Griffin, McDoniel, Lippard, Hines) / Team Project Final presentations
12/ 9/02	- Final Exam - 7 pm (note different time)

Course Syllabus
Department of Kinesiology
College of Health and Human Services
KNES 6121 - Clinical Practice in Exercise Physiology
(3 credits)

Catalog Copy

KNES 6121. Clinical Practice in Exercise Physiology. (3) Knowledge and skills required in the clinical setting including operational standards, examination of current drug therapies, and legal considerations related to practice as a Clinical Exercise Physiologist. (*Fall*)

Rationale

Given that Registered Clinical Exercise Physiologists practice primarily in clinical settings, it is critical that potential practitioners be familiar with the knowledge and skills required to function appropriately in the clinical setting. While in-depth content areas are covered in other courses, this course will also include topics that are part of the national standards but are not extensive enough to require a separate class.

Course Objectives

The student will be able to:

- 1) Identify common clinical intake, processing, and discharge procedures used in the Clinical Exercise Physiology practice.
- 2) Describe and use common clinical tracking procedures.
- 3) Describe usage, side-effects, interactions, and impact upon exercise testing and physiological responses of common pharmacological interventions employed with cardiovascular, pulmonary, immunological, neuromuscular, and musculoskeletal disorders.
- 4) Describe common reimbursement strategies for health care costs and how these are put into practice in the clinical setting.
- 5) Develop and implement a clinical Emergency Action Plan.
- 6) Describe legal issues surrounding the practice of Clinical Exercise Physiology.

University Policies

Academic Integrity

Students have the responsibility to know and observe the requirements of *The UNC Charlotte Code of Student Academic Integrity* (Catalog, p. 262). This code forbids cheating, fabrication, or falsification of information, multiple submission of academic work, plagiarism, abuse of academic material, and complicity in academic dishonesty. Any special requirements or permission regarding academic integrity in this course will be stated by the instructor, and are binding on the students. Academic work is free from academic dishonesty of any type; and grades in this course therefore should be and will be adversely affected by academic dishonesty. The normal penalty for the first offense is zero credit on the work involving dishonesty and further substantial reduction of the course grade. In almost all cases the course grade is reduced to *F*. Copies of the code can be obtained from the Dean of Students Office. Standards of academic integrity will be enforced in this course. Students are expected to report cases of academic dishonesty to the course's instructor.

Special Needs

If you have a documented disability and require accommodation in this course, contact Disability Services, Fretwell 230, phone: 704-687-4355 voice/TDD.

Grading Scale

The following grading will be used in this course:

90% - 100%	A
80% - 89%	B
70% - 79%	C
60% - 69%	D
Less than 60%	F

Teaching Strategies

1. Class discussion
2. Lecture
3. Case Studies
4. Audiovisual presentations

Evaluation Methods

1. Case Studies	20%	100 points
2. First Exam	25%	200 points
3. Second Exam	25%	200 points
4. Final Examination	<u>30%</u>	<u>250 points</u>
	100%	750 points

Required Text

American College of Sports Medicine. *ACSM's Resources for Clinical Exercise Physiology*. Lippincott Williams & Wilkins. Baltimore, MD 2002.

Need a Computer?

UNC Charlotte students may visit computer labs at various sites across campus. For information on location of computer labs and equipment available, call 704-687-3100 and select option one (1) or check UNC Charlotte on the World Wide Web: <http://www.uncc.edu/lis>.

KNES 6121 – Clinical Practice in Exercise Physiology
Lecture Outline

Week	Topic
Week 1	Introduction, Clinical Practice Intake, Processing and Discharge
Week 2	Clinical Practice Intake, Processing and Discharge
Week 3	Payment/reimbursement in clinical practice
Week 4	Patient tracking/evaluation
Week 5	Exam One
Week 6	Pharmacology for Cardiac patients
Week 7	Pharmacology for Pulmonary patients
Week 8	Pharmacology for Immunological patients
Week 9	Pharmacology for Neuromuscular patients
Week 10	Pharmacology for Metabolic patients
Week 11	Pharmacology for Musculoskeletal patients
Week 12	Exam Two
Week 13	Clinical Emergency Action Programs
Week 14	Legal implications of practice
Week 15	Leadership and management in Clinical Practice
Week 16	Final Exam

Course Syllabus
Department of Kinesiology
College of Health and Human Services
KNES 6285 – Advanced Cardiopulmonary Physiology
(3 credits)

Catalog Copy

KNES 6285 Advanced Cardiopulmonary Physiology (3). Prerequisite: none. This course is designed to develop a thorough understanding of cardiovascular physiology, ECG interpretation, and health-related applications. This course examines in detail the various parameters of the cardiovascular system, the implication of disease and structural abnormalities to these parameters, and the relationship of cardiovascular function to exercise adaptation. Emphasis will be placed on usage of the information in the clinical setting. (*Spring*)

Rationale

The increasing number of individuals in the general population dealing with clinical diseases primarily involving cardiovascular or pulmonary alterations, due mainly to poor fitness and weight-related issues. The presence of this population necessitates the need for individuals practicing in the area of clinical exercise physiology to understand these physiological systems and the impact disease-related alterations have on their function.

Course Objectives

The student will understand:

- 1) The heart's structural, contractile, and conduction characteristics.
- 2) The regulation of heart rate, blood pressure, stroke volume and cardiac output at rest.
- 3) The responses and regulation of cardiovascular variables during exercise in trained and untrained individuals of varying ages.
- 4) The lung's structural and respiratory characteristics.
- 5) The regulation of pulmonary ventilation and gas exchange at rest.
- 6) The responses and regulation of pulmonary variables during exercise in trained and untrained individuals of varying ages.
- 7) How to interpret the information collected during clinical cardiovascular and pulmonary assessments.

A. University Policies

Academic Integrity

Students have the responsibility to know and observe the requirements of *The UNC Charlotte Code of Student Academic Integrity* (Catalog, p. 262). This code forbids cheating, fabrication, or falsification of information, multiple submission of academic work, plagiarism, abuse of academic material, and complicity in academic dishonesty. Any special requirements or permission regarding academic integrity in this course will be stated by the instructor, and are binding on the students. Academic work is free from academic dishonesty of any type; and grades in this course therefore should be and will be adversely affected by academic dishonesty. The normal penalty for the first offense is zero credit on the work involving dishonesty and

further substantial reduction of the course grade. In almost all cases the course grade is reduced to *F*. Copies of the code can be obtained from the Dean of Students Office. Standards of academic integrity will be enforced in this course. Students are expected to report cases of academic dishonesty to the course's instructor.

Special Needs

If you have a documented disability and require accommodation in this course, contact Disability Services, Fretwell 230, phone: 704-687-4355 voice/TDD.

Grading Scale: The following grading will be used in this course:

90% - 100%	A
80% - 89%	B
70% - 79%	C
60% - 69%	D
less than 60%	F

Attendance Policy

More than **two** absences during the semester will bring your grade down by **one letter grade** for each absence unless excused by means of documentation of illness or other emergencies.

Attendance for each class period will be taken at the beginning of class. Two late arrivals or early dismissals are equal to one absence.

Teaching Strategies

1. Class discussion
2. Lecture
3. Case Studies
4. Audiovisual presentations

Evaluation Methods

1. Case Studies	20%	100 points
2. First Exam	25%	200 points
3. Second Exam	25%	200 points
4. Final Examination	<u>30%</u>	<u>250 points</u>
	100%	750 points

Required Text

Mohrman, D.E. and L.J. Heller. Cardiovascular Physiology (Fifth Edition) McGraw-Hill Co., Inc., St. Louis, MO 2002.

Huszar, R.J. Basic Dysrhythmias: Interpretation and Management (Third Edition) Mosby-Year Book, Inc., St. Louis, MO, 2001.

West, J.B. Respiratory Physiology: The Essentials (Sixth Edition) Lippincott, Williams & Wilkins, Hagerstown, MD, 1999.

Need a Computer?

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KNES 6285 – Advanced Cardiopulmonary Physiology
Lecture Outline

Week	Lecture	Readings *
Week 1	Introduction, Respiratory physiology structure, Ventilation	Chpts. 1, 2 RP
Week 2	Diffusion, Blood flow, and Ventilation-Perfusion	Chpts. 3, 4, 5 RP
Week 3	Mechanics and Control of Ventilation	Chpts 7, 8 RP
Week 4	Stresses to Ventilation, Clinical tests of pulmonary function	Chpts. 9, 10 RP
Week 5	Exam One	
Week 6	Cardiac Structure	Chpts. 1, 2 CP
Week 7	Cardiac Conduction, Cardiac Contraction	Chpts. 3, 4 CP
Week 8	Peripheral Vascular System	Chpts. 7, 8 CP
Week 9	Venous Pressure, Arterial Pressure	Chpts. 9, 10 CP
Week 10	Cardiovascular System with Exercise and Aging, Pathology	Chpts. 11, 12 CP
Week 11	Exam Two	
Week 12	Basic Electrocardiograms	Chpts. 2, 3 BD
Week 13	Arrhythmias	Chpts. 4, 5, 6 BD
Week 14	Arrhythmias	Chpts. 7, 8, 9 BD
Week 15	Myocardial Ischemia and Infarction	Chpts. 11, 12 BD
Week 16	Final Exam	

* CP = Mohrman, D.E. and L.J. Heller. Cardiovascular Physiology
 BD = Huszar, R.J. Basic Dysrhythmias: Interpretation and Management
 RP = West, J.B. Respiratory Physiology: The Essentials

Course Syllabus
Department of Kinesiology
College of Health and Human Services
KNES 6469 – Directed Independent Study
(1-3 credits)

Catalog Copy

KNES 6469. Directed Independent Study. (1-3) Directed study in areas of specialization in Clinical Exercise Physiology and related fields. Offered on a *Pass/No Credit* basis only. (*Fall, Spring, Summer*)

Rationale

This course provides opportunity for students study Clinical Exercise Physiology topics in a more in-depth manner.

Course Objectives

The course objectives will be determined by the Instructor and will depend on the topic and scope of the directed independent study.

University Policies

Academic Integrity

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Special Needs

If you have a documented disability and require accommodation in this course, contact Disability Services, Fretwell 230, phone: 704-687-4355 voice/TDD.

Grading

The student will be graded based upon criteria determined by the Instructor prior to the initiation of the Directed Independent Study.

Course Schedule

The course schedule will be determined by the Instructor prior to the initiation of the Directed Independent Study.

Course Syllabus
Department of Kinesiology
College of Health and Human Services
KNES 6490 – Advanced Practicum in Clinical Exercise Physiology
(1 credit)

Catalog Copy

KNES 6490. Advanced Practicum in Clinical Exercise Physiology. (1) Acquisition and application of knowledge, skills, and abilities necessary for the Registered Clinical Exercise Physiologist while gaining experiential hours in an appropriate clinical setting. Three (3) credit hours of Advanced Practicum are required for graduation; this course may be repeated for up to six credit hours. (*Fall, Spring, Summer*)

Rationale

Clinical Exercise Physiologists (CEP) normally practice in a clinical environment. Thus, a necessary part of a CEP's education is exposure to and time in a clinical environment. Additionally, registration as a Clinical Exercise Physiologist requires the completion of a certain number of clinical hours. This Practicum is a method by which to expose students to the clinical environment as well as helping them fulfill the clinical-hour requirements of the Registry.

Course Objectives

At the completion of the course the student will have gained experience in providing clinical exercise services for patients with chronic diseases and conditions as specified in the Clinical Exercise Physiologist Scope of Practice. Students will gain experiential hours that count towards satisfying the American College of Sports Medicine's requirement for 1,200 hours of clinical experience in the following areas.

- Cardiovascular: 240 hours required
- Pulmonary: 60 hours required
- Metabolic: 120 hours required
- Orthopedic/Musculoskeletal: 120 hours required
- Neuromuscular: 60 hours required
- Immunological/Hematological: 60 hours required
- Additional hours from any of the above: 540 hours required

University Policies

Academic Integrity

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The normal penalty for the first offense is zero credit on the work involving dishonesty and further substantial reduction of the course grade. In almost all cases the course grade is reduced to *F*. Copies of the code can be obtained from the Dean of Students Office. Standards of academic integrity will be enforced in this course. Students are expected to report cases of academic dishonesty to the course's instructor.

Special Needs

If you have a documented disability and require accommodation in this course, contact Disability Services, Fretwell 230, phone: 704-687-4355 voice/TDD.

Attendance

Students are required to develop and submit a work schedule indicating the number of hours per week they will be gaining experiential hours in a particular setting. Three unexcused absences during a clinical rotation will result in the lowering of the final practicum course grade by one letter. Five unexcused absences will result in failure of the practicum course. It is the student's responsibility to keep up with their scheduled clinical responsibilities and events. If a student cannot make a scheduled clinical responsibility or event, it is his or her responsibility to communicate directly with their supervising Clinical Instructor in a timely fashion. Students are to be prompt and on time for all clinical responsibilities and events. Three tardies for a clinical assignment will equal one unexcused absence.

Grading Scale and Criteria

The student's final grade will be based on the cumulative point totals from each of the following evaluation techniques:

Evaluation Type	Number	Points Each	Total
Clinical experience journal	8 entries	10	80
8 week KSA evaluations	2 sets	100	200
	Total	280	

The student's final grade will be awarded based on the following scale:

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	<60%

Clinical Education Journal

Students are required to keep track of their daily clinical experiences in a journal format provided by the instructor. Students are required to submit their journal entries electronically (via e-mail) every two weeks.

KSA Evaluations

A large component of this course is the clinical evaluation of the student's knowledge, skills, and abilities (KSA) while working in the clinical setting. The student's clinical supervisor will complete a formal evaluation of their skills, professional attributes and likelihood for success at the end of each eight-week time frame during the rotation.

APPENDIX E: SUGGESTED COURSE SEQUENCE AND ROTATION

Suggested Course Sequence and Rotation for
M.S. in Clinical Exercise Physiology

For student taking 9 credits/term

	Fall	Spring	Summer
First Year	6120 – Adv. CEP (3) 6160 – Res Design (3) 6121 – Clinical Pract (3)	5134 – Testing & Presc (3) 6280 – Adv. Ex Physiol (3) 6490 – Practicum (1) Elective (3)	6490 – Practicum (1) 5292 – Adv. AT (3)
<i>Hrs Completed</i>	9	19	23
Second Year	6490 – Practicum (1) 5232 – Physiol. Of Aging (3) Elective (3)	6285 – Adv. CardioPulm Physiol (3) 6900 – Thesis (3)*	
<i>Hrs Completed</i>	30	36 (program complete)	

*For student choosing Comprehensive Exam option, the Exam would be taken in the last semester and the additional three Practicum credits would spread over the last four semesters.

For student taking 6 credits/term

	Fall	Spring	Summer
First Year	6120 – Adv. CEP (3) 6121 – Clinical Pract (3)	5134 – Testing & Presc (3) 6280 – Adv. Ex Physiol (3) 6490 – Practicum (1)	6490 – Practicum (1) 6160 – Res. Design (3)
<i>Hrs Completed</i>	6	13	17
Second Year	6490 – Practicum (1) 5232 – Physiol. Of Aging (3) Elective (3)	6285 – Adv. CardioPulm Physiol (3) Elective (3)	5292 – Adv. AT (3) 6900 – Thesis (3)*
<i>Hrs Completed</i>	24	30	36 (program complete)

*For student choosing Comprehensive Exam option, the Exam would be taken in the last semester and the additional three Practicum credits would spread over the last four semesters.

APPENDIX F: BUDGET PROJECTIONS

**Projected Funding for New Degree Program
 Master of Science in Clinical Exercise Physiology
 Regular Term 2004-2005
 (Based on 2003-2004 Change in Student Credit Hours)**

Program Category	Change in Student Credit Hours			Instructional - Position Funding Factors			Instructional Positions Required		
	Undergrad	Masters	Doctoral	Undergrad	Masters	Doctoral	Undergrad	Masters	Doctoral
Category I				643.72	171.44	138.41	0.000	0.000	0.000
Category II				487.37	249.94	146.74	0.000	0.000	0.000
Category III				364.88	160.93	122.95	0.000	0.000	0.000
Category IV				230.52	102.45	70.71	0.000	0.000	0.000

Fringes for faculty salaries
 FICA @ 7.65%;
 Retirement @ **10.04%**
 Medical @ \$3,432

\$0
 \$0
 \$0

 \$0

Total Positions Required	0.000
Instructional - Position Salary Rate (FY 02)	<u>\$62,573</u>
<i>101-1310</i> Instructional Salary Amount	\$0
Other Academic Costs 44.89300%	<u>0</u>
<i>Purpose 101</i> Total Academic Requirements	\$0
<i>Purpose 151</i> Library 11.48462%	0
<i>Purposes 152, 160, 170 180</i> General Instit Support 54.04980%	0
Neg Adj Factor 50.00000%	n/a
In-state SCHs 0	
Financial Aid (<u>in-state</u>) 67.99800%	<u>0</u>
Total Requirements	<u>\$0</u>

SUMMARY OF ESTIMATED ADDITIONAL COSTS FOR PROPOSED PROGRAM/TRACK

Institution UNC Charlotte Date May 18, 2004
 Program (API#, Name, Level) 51.2311 Kinesiology/Kinesiotherapy (Clin. Exer. Physiology)
 Degree(s) to be Granted M.S. Program Year 2004-2005

ADDITIONAL FUNDING REQUIRED - BY SOURCE

	Reallocation of Present Institutional Resources	Enrollment Increase Funds	Federal/State or Other Non-state Funds (Identify)	New Allocations	Total
101 Regular Term Instruction					
1210 SPA Regular Salaries					\$0
1110 EPA Non-teaching Salaries					0
1310 EPA Academic Salaries Coordinator Stipend	0	0	0		0
1810 Social Security					0
1820 State Retirement					0
1830 Medical Insurance (2933*X)					0
2000 Supplies and Materials					0
2300 Educational Supplies					0
2600 Office Supplies					0
3000 Current Services	0				0
3100 Travel					
3200 Communications					
3400 Printing & Binding					
5000 Capital Outlay (Equipment)					0
5100 Office Equipment					
5200 EDP Equipment					
TOTAL Regular Term Instruction	\$0	\$0	\$0	\$0	\$0
151 Libraries					
5000 Capital Outlay (Equipment)		0			0
5600 Library Book/Journal					
TOTAL Libraries	\$0	\$0	\$0	\$0	\$0
189 General Institutional Support					
2000 Supplies and Materials					0
2600 Office Supplies					
3000 Current Services					0
3200 Communications					
3400 Printing & Binding					
5000 Capital Outlay (Equipment)					0
5100 Office Equipment					
5200 EDP Equipment					
TOTAL General Inst. Support	\$0	\$0	\$0	\$0	\$0
TOTAL ADDITIONAL COSTS	\$0	\$0	\$0	\$0	\$0

NOTE: Accounts may be added or deleted as required.

**Projected Funding for New Degree Program
 Master of Science in Clinical Exercise Physiology
 Regular Term 2005-2006
 (Based on 2004-2005 Change in Student Credit Hours)**

Program Category	Change in Student Credit Hours			Instructional - Position Funding Factors			Instructional Positions Required		
	Undergrad	Masters	Doctoral	Undergrad	Masters	Doctoral	Undergrad	Masters	Doctoral
Category I				643.72	171.44	138.41	0.000	0.000	0.000
Category II				487.37	249.94	146.74	0.000	0.000	0.000
Category III		462		364.88	160.93	122.95	0.000	2.871	0.000
Category IV				230.52	102.45	70.71	0.000	0.000	0.000

<i>Fringes for faculty salaries</i>	
<i>FICA @ 7.65%;</i>	\$13,742
<i>Retirement @ 10.04 %</i>	\$18,035
<i>Medical @ \$3,4323</i>	\$9,853
	<hr/>
	\$41,630
	<hr/>

Total Positions Required		2.871
Instructional - Position Salary Rate	(FY 02)	<u>\$62,573</u>
<i>101-1310</i>	Instructional Salary Amount	\$179,635
	Other Academic Costs	44.89300% <u>80,644</u>
<i>Purpose 101</i>	Total Academic Requirements	\$260,279
<i>Purpose 151</i>	Library	11.48462% 29,892
<i>Purposes 152, 160, 170 180</i>	General Instit Support	54.04980% 140,680
	Neg Adj Factor	50.00000% n/a
	In-state SCHs	0
	Financial Aid (<u>in-state</u>)	67.99800% <u>0</u>
	Total Requirements	<u>\$430,851</u>

SUMMARY OF ESTIMATED ADDITIONAL COSTS FOR PROPOSED PROGRAM/TRACK

Institution UNC Charlotte Date May 18, 2004
 Program (API#, Name, Level) 51.2311 Kinesiology/Kinesiotherapy (Clin. Exer. Physiology)
 Degree(s) to be Granted M.S. Program Year 2005-2006

ADDITIONAL FUNDING REQUIRED - BY SOURCE

	Reallocation of Present Institutional Resources	Enrollment Increase Funds	Federal/State or Other Non-state Funds (Identify)	New Allocations	Total
101 Regular Term Instruction					
1210 SPA Regular Salaries					\$0
1110 EPA Non-teaching Salaries					0
1310 EPA Academic Salaries		179,635	0		179,635
		179,635			
1810 Social Security		13,742			13,742
1820 State Retirement		18,035			18,035
1830 Medical Insurance		9,853			9,853
2000 Supplies and Materials		19,014			19,014
2300 Educational Supplies		15,014			
2600 Office Supplies		4,000			
3000 Current Services		12,000			12,000
3100 Travel		4,000			
3200 Communications		4,000			
3400 Printing & Binding		4,000			
5000 Capital Outlay (Equipment)		8,000			8,000
5100 Office Equipment		4,000			
5200 EDP Equipment		4,000			
TOTAL Regular Term Instruction	\$0	\$260,279	\$0	\$0	\$260,279
151 Libraries					
5000 Capital Outlay (Equipment)		29,892			29,892
5600 Library Book/Journal		29,892			
TOTAL Libraries	\$0	\$29,892	\$0	\$0	\$29,892
189 General Institutional Support					
2000 Supplies and Materials		20,000			20,000
2600 Office Supplies		20,000			
3000 Current Services		20,000			20,000
3200 Communications		10,000			
3400 Printing & Binding		10,000			
5000 Capital Outlay (Equipment)		100,680			100,680
5100 Office Equipment		40,000			
5200 EDP Equipment		60,680			
TOTAL General Inst. Support	\$0	\$140,680	\$0	\$0	\$140,680
TOTAL ADDITIONAL COSTS	\$0	\$430,851	\$0	\$0	\$430,851

NOTE: Accounts may be added or deleted as required.

**Projected Funding for New Degree Program
 Master of Science in Clinical Exercise Physiology
 Regular Term 2006-2007
 (Based on 2005-2006 Change in Student Credit Hours)**

Program Category	Change in Student Credit Hours			Instructional - Position Funding Factors			Instructional Positions Required		
	Undergrad	Masters	Doctoral	Undergrad	Masters	Doctoral	Undergrad	Masters	Doctoral
Category I				643.72	171.44	138.41	0.000	0.000	0.000
Category II				487.37	249.94	146.74	0.000	0.000	0.000
Category III		90		364.88	160.93	122.95	0.000	0.559	0.000
Category IV				230.52	102.45	70.71	0.000	0.000	0.000

Fringes for faculty salaries
 FICA @ 7.65%;
 Retirement @ **10.04%**
 Medical @ \$3432

\$2,677
 \$3,513
 \$1,919

 \$8,110

Total Positions Required	0.559
Instructional - Position Salary Rate (FY 02)	<u>\$62,573</u>
<i>101-1310</i> Instructional Salary Amount	\$34,994
Other Academic Costs 44.89300%	<u>15,710</u>
<i>Purpose 101</i> Total Academic Requirements	\$50,704
<i>Purpose 151</i> Library 11.48462%	5,823
<i>Purposes 152, 160, 170 180</i> General Instit Support 54.04980%	27,405
Neg Adj Factor 50.00000%	n/a
In-state SCHs 0	
Financial Aid (<u>in-state</u>) 67.99800%	<u>0</u>
Total Requirements	<u>\$83,932</u>

SUMMARY OF ESTIMATED ADDITIONAL COSTS FOR PROPOSED PROGRAM/TRACK

Institution UNC Charlotte Date May 18, 2004
 Program (API#, Name, Level) 51.2311 Kinesiology/Kinesiotherapy (Clin. Exer. Physiology)
 Degree(s) to be Granted M.S. Program Year 2006-2007

ADDITIONAL FUNDING REQUIRED - BY SOURCE

	Reallocation of Present Institutional Resources	Enrollment Increase Funds	Federal/State or Other Non-state Funds (Identify)	New Allocations	Total
<u>101 Regular Term Instruction</u>					
1210 SPA Regular Salaries					\$0
1110 EPA Non-teaching Salaries					0
1310 EPA Academic Salaries		34,994	0		34,994
1810 Social Security		2,677			2,677
1820 State Retirement		3,513			3,513
1830 Medical Insurance		1,919			1,919
2000 Supplies and Materials		2,001			2,001
2300 Educational Supplies		1,501			
2600 Office Supplies		500			
3000 Current Services		1,100			1,100
3100 Travel		600			
3200 Communications		300			
3400 Printing & Binding		200			
5000 Capital Outlay (Equipment)		4,500			4,500
5100 Office Equipment		1,500			
5200 EDP Equipment		3,000			
TOTAL Regular Term Instruction	\$0	\$50,704	\$0	\$0	\$50,704
<u>151 Libraries</u>					
5000 Capital Outlay (Equipment)		5,823			5,823
5600 Library Book/Journal		5,823			
TOTAL Libraries	\$0	\$5,823	\$0	\$0	\$5,823
<u>189 General Institutional Support</u>					
2000 Supplies and Materials		4,405			4,405
2600 Office Supplies		4,405			
3000 Current Services		8,000			8,000
3200 Communications		4,000			
3400 Printing & Binding		4,000			
5000 Capital Outlay (Equipment)		15,000			15,000
5100 Office Equipment		5,000			
5200 EDP Equipment		10,000			
TOTAL General Inst. Support	\$0	\$27,405	\$0	\$0	\$27,405
TOTAL ADDITIONAL COSTS	\$0	\$83,932	\$0	\$0	\$83,932

NOTE: Accounts may be added or deleted as required.