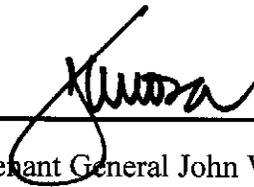


Exercise Science Major, B.S.

A handwritten signature in black ink, appearing to read "J. Rosa", is positioned above a horizontal line. The signature is written in a cursive style with a large initial 'J'.

Lieutenant General John W. Rosa, President

Contact Information

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Classification

Program Title: Exercise Science

Academic Unit Involved: Department of Health, Exercise and Sport Science
School of Science and Mathematics

Designation: Exercise Science Major, 4-Year Baccalaureate
(B.S.)

Proposed Date of Implementation: Spring 2013

CIP Code: 310505

Identification of Program: New (Change the B.S. in Physical Education with
Concentration in Health and Wellness to a B.S. in
Exercise Science)

Site: The Citadel

Program Qualifies for Supplemental
Palmetto Fellow Scholarship and
Life Scholarship Awards: Yes

Delivery Mode: Traditional

Justification

Purpose and Objectives

When the CHE approved The Citadel's proposal to offer the B.S. in Physical Education in the 1970s, the students seeking that degree were preparing themselves for careers in teaching physical education and coaching at the secondary level. As the interests of our students have changed over the years, so have our curricula. The first change in the Physical Education degree was providing two tracks: Teaching and Professional. As the needs and interests of our students became more refined, we provided three Tracks: Teaching, Sport Management and Administration, and Health and Wellness. In the 1990s when we felt these tracks were sufficiently well defined, we proposed to the CHE that we be allowed to provide the B.S. in Physical Education with three Concentrations: Teaching, Sport Management and Administration, and Health and Wellness. We now feel the quality of our Concentrations and the interests of our students are sufficient to warrant replacing each Concentration with an individual degree. Thus, the purpose of this proposal is to permit The Citadel to replace the B.S. in Physical Education with Concentration in Health and Wellness with the B.S. in Exercise Science.

Currently, of the 169 majors in the Department of Health, Exercise, and Sport Science, 140 are in the B.S. in Physical Education with a Concentration in Health and Wellness. There has been an increase of 126% in the Health and Wellness Concentration from the 2005-06 to 2011-12. We believe that the B.S. in Physical Education with a Concentration in Health and Wellness no longer adequately describes the degree program earned by these students. This request to change from a B.S. in Physical Education with a Concentration in Health and Wellness to the B.S. in Exercise Science will result in the following objectives: 1) bring the title of The Citadel's program in line with other institutions offering degree programs with comparable requirements, 2) provide students with a better understanding of the degree which should result in improved recruitment of students into this major, and 3) provide our students with a degree program that will be easily recognized by admission committees for allied health and related graduate programs, 4) bring in line the name of the department with the name of the major and finally but most importantly 5) better prepare students for graduate programs (i.e. physical therapy, exercise science, nutrition) and careers (fitness trainer, corporate wellness, cardiac rehabilitation) after graduation with this degree.

The requirements of this program have been altered and refined throughout the years and have been modified substantially to warrant a change from a concentration in health and wellness to a new major in exercise science. The Citadel's program is similar to programs offered by South Carolina institutions such as Lander University, Coastal Carolina University, University of South Carolina Aiken, and Winthrop University as well as degree programs offered by institutions from across the country such as Oregon State University, University of Pittsburgh, and Minnesota State University.

Need for the Program

Student Need

As we have already presented, there are currently 140 majors in the B.S. in Physical Education with a Concentration in Health and Wellness. This represents an increase of 126% from the 2005-06 academic year to the 2011-12 academic year, and based on informal surveys of current Citadel students and visits with incoming freshman, offering a B.S. in Exercise Science will only increase interest and retention in this major.

The B.S. in Exercise Science provides an appropriate preparation for those students who aspire to work in any of the following: 1) allied health (physical or occupational therapists, chiropractor, physician assistants, nurses, nurse practitioner, dentists, or physicians), 2) a fitness facility as a fitness trainer (corporate wellness facilities), or 3) a hospital or rehabilitation center training an unhealthy population (cardiac rehabilitation). Most of these careers require that the students continue their studies in an exercise science graduate program (biomechanics, exercise physiology, muscle physiology), and the B.S. in Exercise Science provides the flexibility to enable our students to prepare themselves for any of the options.

Regional, State, National, and Global Need

The Centers for Disease Control cites that in 2010 33.8% of the population in this country was obese. In South Carolina, 31.5% of the population was obese. When considering obesity and being overweight (body mass index of greater than or equal to 25) together, 68% of all adults ages 20 and older fall into this category, and this unprecedented trend continues. In addition to the psychological and physiological effects of obesity and being overweight, there are secondary implications of increased body mass index which includes such things as cancer, diabetes, and cardiovascular disease. Not only are adults overweight/obese, but approximately 31% of the adult population (only) engages in regular physical activity.

Based on these alarming trends, it is imperative that we provide as many well educated, highly qualified practitioners in health and wellness and allied health careers as possible to educate the population on the dangers of this epidemic and make them aware of ways to reduce their risks. Increasing the number of graduates from strong B.S. in Exercise Programs is an excellent first step toward providing these much needed qualified health professionals. This program provides future fitness professionals with sound scientific education on the effects of exercise on physiological mechanisms such as hormones; understanding of the biomechanics of movement; effects of nutrition during a sports activity as well as healthy nutritional needs; and appropriate resistance exercise protocols. The need is immediate, and the demand for professionals in these career tracks is increasing. The Bureau of Labor Statistics projects that fitness related careers will grow much quicker than other careers, (increasing 29% or more from now until 2018) (United States Department of Labor, Bureau of Labor Statistics, (<http://www.bls.gov/oco/ocos296.htm>)). The State of South Carolina's Bureau of Labor Statistics states that there has been a 12% increase in Education and Health Science employment from 2002 to 2011 (<http://www.bls.gov/eag/eag.sc.htm>). In addition the Bureau cites that those

persons who have a greater education and understanding of the issues associated with wellness, will have an increased opportunity for job growth.

In addition to the positive outlook for those in the fitness careers, those who are entering allied health careers such as physical therapist see similar increases in job opportunities. The Bureau of Labor Statistics cites a 30% increase from 2008 to 2018 in the area of physical therapy (United States Department of Labor, Bureau of Labor Statistics, <http://www.bls.gov/oco/ocos296.htm>). With the statistics pointing to a positive outlook for these careers (those which are most sought by our majors), it is important that students who graduate from our program have the B.S. in Exercise Science, the appropriate degree for their career aspirations.

Industry Need

The Centers for Disease Control cites that obesity costs the country 150 billion dollars per year, with 1 out of 3 adults and 1 out of 6 children being obese (CDC, <http://www.cdc.gov/cdctv/ObesityEpidemic/>). It has been cited that this epidemic is due to increased food intake and decreased activity levels. Thus, the health and fitness industries are desperate for well qualified professionals who can educate our masses on appropriate nutrition and activity levels and are prepared to provide hands-on training where needed. Here are statistics form (United States Department of Labor, Bureau of Labor Statistics, <http://www.bls.gov/oco/ocos296.htm>) for a few of the varied health and fitness careers that start with the B.S. in Exercise Science.

Fitness Trainers and Instructors: 2010 Median Income: \$31,090 per year ;
Number of Jobs, 2010: 251,400; Job Outlook, 2010-20:24% Increase (Faster than
average); Employment Change, 2010-20:60,400.

B.S. exercise science

Physical Therapist: 2010 Median Income: \$76,310 per year; Number of Jobs,
2010: 198,600 Job Outlook, 2010-20:39% Increase (Much faster than average)
;Employment Change, 2010-20:77,400.

B.S. exercise science followed by graduate degree in physical therapy.

Dietitians and Nutritionists: 2010 Median Income: \$53,250 per year; Number of
Jobs, 2010:64,400; Job Outlook, 2010-20: 20% Increase (Faster than average);
Employment Change, 2010-20: 12,700.

B.S. exercise science followed by graduate degree in nutrition

Occupational Therapists: 2010 Median Income: \$72,320 per year; Number of
Jobs, 2010: 108,800; Job Outlook, 2010-20: 33% Increase (Much faster than
average); Employment Change, 2010-20: 36,400.

*B.S. degree in exercise science followed by graduate degree in occupational
therapy*

Centrality of the Program to the Mission of The Citadel as Defined by CHE

The B.S. in Exercise Science will replace the B.S. in Physical Education with a Concentration in Health and Wellness, a program that has already established a central role in meeting the mission of The Citadel. In addition with Physical Effectiveness being one of the pillars of The Citadel Education and a central feature of our Quality Enhancement Plan (QEP) for the Southern Association of Colleges and Schools, this major serves a prominent role in meeting the educational mission of the College.

Relationship of the Proposed Program to Existing Programs at The Citadel

The B.S. in Exercise Science will continue to share courses with the other Concentrations offered by the Department of Health, Exercise, and Sport Science as well as specialized courses offered by the Department of Biology. While there is no formal pre-allied health major at The Citadel, many students interested in these areas choose the Health and Wellness Concentration or to major in Biology or Chemistry. These programs will continue to share resources and students.

Similarities or Differences Between Proposed Program and Those with Similar Objectives at Other Institutions.

Although The Citadel is in close proximity with the College of Charleston, where the B.S. in Exercise Science is also offered, the missions of the schools are distinctly different, and they recruit from different student populations. The Citadel's B.S. in Exercise Science will be comparable to exercise science programs such as those offered by Lander University, USC-Columbia, USC- Aiken, Winthrop University, and Coastal Carolina University.

In comparing these major programs with the new exercise science curriculum at The Citadel, there are many similarities which include the following courses: Biology, two Anatomy/Physiology courses with labs, Chemistry I and II or Physics I and II, Introduction to Exercise Science, Exercise Physiology and Laboratory, Exercise Testing and Prescription, Biomechanics/Kinesiology, Care and Prevention of Athletic Injuries/Injury Management, First Aid/CPR, Nutrition, Sports Nutrition, Motor Development, Measurement and Evaluation/Statistics and Research, Senior Seminar, and Field Experience. In addition, all majors at The Citadel are required to take two Health and Wellness courses and one Activity based class.

In distinguishing the differences, there are few, except that we have now added two new approved elective courses to our curriculum: Medical Terminology and Techniques of Strength and Conditioning. In addition, we require majors to take a Disabilities and Physical Activity course so they increase their understanding the fundamentals of exercise prescription/practice for individuals with a variety of disabilities. Finally, we have added Organic Chemistry I and II to the list of approved electives for those students who wish to pursue a degree in a pre-allied health profession.

Enrollment

Currently we have 140 students pursuing the Health and Wellness Concentration with this number increasing each academic year. Over the last two years, enrollment has increased by 12%. In the table below, projected enrollment numbers begin with current enrollment and anticipate a conservative 5% increase each year. Credit hours are based on 16 credit hours each fall and spring semester for each student in the program. Admissions criteria for this program will continue as it is in the current Health and Wellness Concentration.

PROJECTED TOTAL ENROLLMENTS 2011-2017(STARTING WITH 2011-12 DATA)

YEAR	FALL		SPRING	
	Headcount	Credit Hours	Headcount	Credit Hours
2011-2012	140	2240	140	2240
2012-2013	147	2352	147	2352
2013-2014	154	2464	154	2464
2014-2015	162	2592	162	2592
2015-2016	170	2720	170	2720
2016-2017	178	2848	178	2848

PROJECTED NEW ENROLLMENT 2012-2017(STARTING WITH 2011-12 DATA)

YEAR	Fall Headcount	Fall Credit Hours	Spring Headcount	Spring Credit Hours	Summer Headcount	Summer Credit Hours
2011-2012	35	560	35	560	0	0
2012-2013	37	592	37	592	0	0
2013-2014	39	624	39	624	0	0
2014-2015	41	656	41	656	0	0
2015-2016	43	688	43	688	0	0
2016-2017	45	720	45	720	0	0

Curriculum

The course of study for this program provides sufficient flexibility to enable the student to tailor his or her program to be best prepared to enter the chosen career or graduate or professional program. All students in this degree program take exercise physiology I (with a lab), exercise physiology II, kinesiology, exercise testing and prescription, nutrition, sports nutrition, motor development and learning, care and prevention of athletic injuries, measurement and evaluation of human performance, and two terms of human anatomy and physiology. Because many students continue their studies either in an exercise science based program or an allied health program, the approved electives are tailored to meet the pre-requisites of the appropriate graduate program. For example, students preparing themselves to pursue a graduate program in physical therapy will take both two terms of chemistry (core requirement) and two additional terms of physics to meet pre-requisites for that graduate program. In addition, they will take a statistics class as an approved elective, also to fulfill a pre-requisite requirement. Finally, in some cases we have aspiring dentists and physicians who need both organic and inorganic chemistry as pre-requisites for medical school, and these classes are also part of our approved

elective list. The appropriate prerequisite courses are selected through careful, one on one advising.

Sample Exercise Science curriculum

Freshman Year, Fall Term

Course Title	Prefix	Number	Cr. Hrs.
Composition and Literature I	ENGL	101	3
History / Western or World	HIST		3
Intro to HESS and PE	PHED	101	3
General Biology I	BIOL	101	3
General Biology Laboratory	BIOL	111	1
Contemp. Health Found.	RPED	250	2
First Year Seminar	ORTN	101	1
ROTC – 1 st Basic (AERO,MLTY, or NAVL)			
	Total		16

Freshman Year, Spring Term

Course Title	Prefix	Number	Cr. Hrs.
Composition and Literature II	ENGL	102	3
History/Western or World	HIST		3
Motor Development	PHED	200	3**
Social Science	PSYC	201	3
Foundations of Fitness	RPED	251	2
ROTC – 1 st Basic (AERO,MLTY, or NAVL)			
	Total		14

Sophomore Year, Fall Term

Course Title	Prefix	Number	Cr. Hrs.
Major British Writers	ENGL	201	3
Human Anatomy And Physio I	BIOL	317	3
Human Anatomy And Physio I Lab	BIOL	327	1
Elementary Mathematical Modeling	MATH	104	3
First Aid and CPR	RPED	113	0
Elective (write in)			3
Approved Elective (see list)			3
ROTC - 2nd Basic (AERO,MLTY, or NAVL)			
	Totals		16

Sophomore Year, Spring Term

Course Title	Prefix	Number	Cr. Hrs.
English, American, World Literature	ENGL		3
Human Anatomy And Physio II	BIOL	318	3
Human Anatomy And Physio II Lab	BIOL	328	1
Finite Math	MATH	105	3
Care and Prevention of Athletic Injuries	PHED	202	3
Accommodation for Persons with Disabilities/Adapted PA	PHED	203	3
Required PE (je archery, jogging, swimming)	RPED		0
ROTC - 2nd Basic (AERO,MLTY, or NAVL)			

Totals 16

Junior Year, Fall Term

Course Title	Prefix	Number	Cr. Hrs.
Physical Science			4
A Modern Language			3
Developmental Psychology	PSYC	202	3
Biomechanical Kinesiology	PHED	314	3
Exercise Physiology I	PHED	319	4
1st Year Advanced ROTC			

Totals 17

Junior Year, Spring Term

Course Title	Prefix	Number	Cr. Hrs.
Measurement and Evaluation	PHED	305	3
Physical Science			4
Informative Speaking	ENGL	205	3
A Modern Language			3
Drug and Substance Abuse	HLED	302	3
Exercise Physiology II	PHED	320	3*
1st Year Advanced ROTC			

Totals 19

Senior Year, Fall Term

Course Title	Prefix	Number	Cr. Hrs.
A Modern Language			3
First Aid and Emergency Care	HLED	400	3
			3
Exercise Testing and Prescription	PHED	401	3 *
Nutrition	HLED	401	3
Approved Elective			3
2nd Year Advanced ROTC			

Totals 18

Senior Year, Spring Term

Course Title	Prefix	Number	Cr. Hrs.
Sports Nutrition	HLED	402	3**
A Modern Language			3
Administration of HESS and PE	PHED	404	3
Approved Elective			3
Directed Field Experience	PHED	406	3
Senior Seminar in HESS and PE	PHED	421	1
2nd Year Advanced ROTC			

Totals 16

129 hours after 4th year, without RPEDs and ROTC courses

* Indicates a new course

** Indicates courses which have served as approved electives that will become part of the core

Courses Added to Core Curriculum

For the B.S. in Exercise Science, a combination of current classes and new classes will be offered to meet the curriculum needs of this major. There will be a shift from the current approved elective list of 2 classes (PHED 200 and HLED 402) to be added to the core curriculum. In addition, there will be 2 new classes (PHED 401 and PHED 320) that will be added to the core curriculum. Finally, we are offering 2 additional courses to be added to the approved elective list (HLED 411 and PHED 411). Please see below for descriptions of these classes.

Current Courses Moved from the Approved Elective List to the Core Curriculum

PHED 200 *Motor Development* Three Credit Hours

Instruction will focus on study of sequential changes and characteristics of physical growth and development related to physical activity across the lifespan. Consideration of factors associated with individual differences in attaining motor proficiency during childhood, adolescence, and adulthood will be examined. A field experience component of a minimum of 5 hours is required.

HLED 402 *Sports Nutrition* Three Credit Hours

The purpose of this course is to introduce the student to the application of nutrition as it relates to human performance parameters. Such topics to be covered will be metabolism during endurance events, timing of nutrition to enhance performance, chemical structure of macronutrients, and commercial dieting techniques of athletes and effectiveness

New Courses Added to Core Curriculum

PHED 401 *Exercise Testing and Prescription* Three Credit Hours

Instruction will focus on the principles of exercise testing and assessment of fitness. Focus will also be placed on the development of an exercise prescription to enhance fitness, improve health, and reduce risk factors in healthy and diseased populations, across the lifespan. *Prerequisites: PHED 319 and PHED 320*

PHED 320 *Exercise Physiology II* Three Credit Hours

This course will build upon the fundamentals of Exercise Physiology I developed during previous Health, Exercise & Sport Science coursework. The purpose of this course is to provide a more in-depth examination of the major content areas of the exercise physiology discipline including, but not limited to, the following topics: cardiovascular adaptations to exercise training, skeletal muscle adaptations to training, exercise endocrinology, and environmental exercise physiology. *Prerequisites: PHED 319*

New Courses Added to the Approved Elective Curriculum

HLED 411 *Techniques of Conditioning for Sports* Three Credit Hours

The purpose of this course is to provide students with the fundamental concepts of human physiology and exercise physiology as they apply to programs of physical conditioning, training, and physical fitness. Theories, current research, and laboratory techniques for assessing human physiological responses to exercise, physical training, health-related physical fitness, and sport performance will be studied. This class is designed as a preparation for the Certified Strength and Conditioning Specialist (CSCS) exam.

PHED 411 *Medical Terminology* Three Credit Hours The purpose of this course will be to introduce students to medical terminology as it relates to such areas as the skeletal, muscular, cardiovascular, lymphatic, immune, respiratory, digestive, urinary, nervous, skin, endocrine, and reproductive systems.

Professional Core (43 Cr)

PHED 101 - Introduction to HESS and PE (3 Cr)

RPED 113 - First Aid and CPR (0 Cr)

PHED 200- Motor Development (3 Cr)

BIOL 317 – Human Anatomy and Physiology I (3 Cr)

BIOL 327 – Human Anatomy and Physiology I lab (1 Cr)

BIOL 218 – Human Anatomy and Physiology II (3 Cr)

BIOL 328 – Human Anatomy and Physiology lab II (1 Cr)
 PHED 202 – Care and Prevention of Athletic Injuries (3 Cr)
 PHED 203- Accommodating Persons with Disability in Exercise (3 Cr)
 PHED 314- Biomechanical Kinesiology (3 Cr)
 PHED 319- Exercise Physiology I and Lab (4 Cr)
 PHED 320- Exercise Physiology II (3 Cr)
 PHED 305- Measurement and Evaluation (3 Cr)
 HLED 302- Drug and Substance Abuse (3 Cr)
 HLED 400 – First Aid and Emergency Care (3 Cr)
 HLED 401- Nutrition (3 Cr)
 HLED 420 – Sport Nutrition (3 Cr)
 PHED 401 – Exercise Prescription and Fitness Assessment (3 Cr)
 PHED 404 – Administration of HESS and PE (3 Cr)
 PHED 406- Field Experience in HESS (3 Cr)
 PHED 421 – Senior Seminar (1 Cr)

Directed Electives list (must select 6 – 24 Cr)

Course Title	Prefix	Title	Cr. Hrs.	
General Biology II	BIOL	102	3	
Environmental Science	BIOL	209	3	
Genetics	BIOL	308	4	
Microbiology	BIOL	310	4	
Microcomputer Applications	CSCI	110	3	
Human Sexuality	HLED	403	3	
Public Health	HLED	404	3	
Health and Epidemiology	HLED	408	3	
Consumer Health	HLED	410	3	
Special Topics	HLED/PHED	411	3*	
Senior Research Project	PHED	420	3	
General Psychology	PSYC	201	3	
Abnormal Psychology	PSYC	304	3	
Theories of Personality	PSYC	306	3	
Industrial/Org. Psychology	PSYC	404	3	
Intro. To Sociology	SOCI	201	3	
Statistical Methods	STAT	160	3	
Organic Chemistry I	CHEM	207	4	with lab
Organic Chemistry II	CHEM	208	4	with lab
Chemistry I	CHEM	103	4	with lab
Chemistry II	CHEM	104	4	with lab
Physics I	PHYS	203	4	with lab

Physics II	PHYS	204	4	with lab
Sports Psychology	PHED	408	3	

*HLED 411 – Special Topics – *Techniques of Conditioning for Sports* (3 Cr)

*PHED 411 – Special Topics – *Medical Terminology* (3 Cr)

Cognate (12 Cr)

BIOL 101 or 130 - General Biology I (3 Cr)

BIOL 111 or 113 – General Biology I Laboratory (1 Cr)

CHEMISTRY or PHYSICS I with laboratory (4 Cr)

CHEMISTRY or PHYSICS II with laboratory (4 Cr)

Program Objectives/Learning Outcomes

1. Students will demonstrate a working knowledge of the foundations of exercise science, health and wellness, sport management, and physical fitness.
2. Students will learn human movement concepts, and biomechanical and physiological outcomes associated with physical work.
3. Students will display competency in exercise testing and prescription formulation, as well as know the benefits of exercise in healthy, diseased/injured, and special populations.
4. Students will demonstrate knowledge of athletic related injuries and the treatment of such injuries as well as creating safer environments for athletes.
5. Students will demonstrate competency in the fundamentals of research related to health and wellness, physical fitness, and exercise science to include submission of IRBs for pilot research, research design and testing, conducting statistics, and reviewing literature related to their research.
6. Students will demonstrate competency in fitness and strength testing to include an understanding of assessments in the areas of aerobic fitness, anaerobic fitness, muscular endurance, muscular strength, body composition, and flexibility
7. Students will apply knowledge and skills in subject matter areas to professional settings through directed field experiences and internships.
8. Students will apply knowledge learned in their 4 years of study in a capstone seminar course.

Assessment of Student Learning Outcomes

These leaning objectives and learning outcomes will be assessed through written tests, oral tests, research abstracts, poster presentations at The Citadel Research Conference and regional conferences (example: Southeast Chapter of the American College of Sports Medicine), oral presentations, laboratory reports, and class projects.

Faculty

Table details each faculty/instructor involved in the program

LIST STAFF BY RANK	HIGHEST DEGREE EARNED	FIELD OF STUDY	TEACHING IN FIELD
Assistant Professor	Ph.D.	Exercise Physiology	YES
Assistant Professor	Ph.D.	Exercise Physiology	YES
Associate Professor	Ph.D.	Exercise Physiology	YES
Adjunct Professor	Ed.D.	Physical Education	YES
Adjunct Professor	M.S.	Exercise Science	YES
Adjunct Professor	M.S./Licensed Athletic Trainer	Exercise Science and Athletic Training	YES
Assistant Professor	Ph.D.	Physical Education	YES
Adjunct Professor	M.D.	General Medical Practitioner	YES
Assistant Professor	Ph.D.	Sports Management	YES
Assistant Professor	Ph.D.	Exercise Science	FALL 2012
Adjunct Professor	Ph.D.	Exercise Science	FALL 2012

Institutional Plan for Faculty Development

Each faculty member is expected to teach 12 credit hours per term (9 credit hours if the teaching load includes a graduate course), stay current in their field of expertise, and be active in their profession organizations. The Citadel supports these expectations through Faculty Development and Research grants through an annual grant from The Citadel Foundation. Each faculty member has the opportunity to apply each year for a Faculty Development and a Research Grant of up to \$2500.00 each.

Institutional Definition of Full-Time Equivalent (FTE)

One FTE faculty is defined as twenty-four hours of teaching during the entire academic year.

UNIT ADMINISTRATION/FACULTY/STAFF SUPPORT

YEAR	NEW		EXISTING		TOTAL	
	Headcount	FTE	Headcount	FTE	Headcount	FTE
Administration						
2012 – 13	0	0	1	.5	1	.5
2013-14	0	0	1	.5	1	.5
2014-15	0	0	1	.5	1	.5
2015-16	0	0	1	.5	1	.5
2016-17	0	0	1	.5	1	.5

Faculty						
2012 – 13	0	0	11	6.75	11	6.75
2013 – 14	0	0	11	6.75	11	6.75
2014 – 15	0	0	11	6.75	11	6.75
2015 – 16	0	0	11	6.75	11	6.75
2016 – 17	0	0	11	6.75	11	6.75
Staff						
2012-13	0	0	2	1.25	2	1.25
2013-14	0	0	2	1.25	2	1.25
2014-15	0	0	2	1.25	2	1.25
2015-16	0	0	2	1.25	2	1.25
2016-17	0	0	2	1.25	2	1.25

Physical Plant

Existing Facilities

This program will be housed in Deas Hall, a two-story structure of approximately 88,000 square feet on The Citadel campus. The first floor contains a 14,500 square foot gymnasium that is used for both recreation and several physical education courses. In addition, there are 6 racquetball courts, strength training facilities, and 25-meter swimming pool.

The second story contains 6 academic classrooms, a computer laboratory, faculty and administrative offices, and aerobic fitness and Nautilus equipment rooms. All academic classrooms are outfitted for multi-media presentations with computers, internet connections, and LCD projectors.

The newest addition to the facilities occurred in fall 2010 when the Dr. Hank Cross Human Performance Laboratory was opened. This facility was a gift from a donor company, Bite Tech Inc., in support of students in the concentration in Health and Wellness and the research of the faculty supporting that concentration. It is approximately 1400 square feet of space for exercise testing of athletics and subjects, blood and hormone laboratory space, a conference room, three offices, and a changing/restroom area. This new laboratory has provided faculty effective space to conduct labs for current undergraduate and graduate students and to conduct ongoing research which includes both undergraduate and graduate students in the area of exercise science. This facility has improved program delivery and research visibility within the field of exercise science.

Additional Physical Plant Requirement

No additional physical plant additions or modifications are needed for this program.

Equipment

The Dr. Hank Cross Human Performance Laboratory contains state of the art equipment which includes: metabolic cart, BOD POD for body composition, EKG and EMG equipment, 2 treadmills, 3 exercise bikes with resistance capabilities, and equipment needed for exercise biochemistry such as plate reader, plate washer, centrifuge, ultra-low temperature freezer, freezer, refrigerator, water purification system, and a vortex mixer. New equipment will be purchased during the 2012-2013 school year for a new faculty member and includes equipment to do research in the area of single fiber and whole muscle physiology. The equipment will include such things as pH analyzer, CO-oximeter, ultrasonic flow meter and probes, peristaltic pumps, and electrical stimulator.

Library Resources

Relevant holdings in the Daniel Library include more than 10,500 references to health, exercise science, and physical education and over 650 print and electronic journal subscriptions. Journal

collections include archival holdings in print, microform, and electronic format. Faculty and students have access to discipline-specific online resources and databases on and off campus including *SPORTDiscus*, *Physical Education Index*, and *Sport Business Research Network*. Other databases of value to faculty and students studying health, exercise science, and physical education include *ScienceDirect*, *CINAHL*, *MEDLINE*, *Health & Wellness Resource Center*, *Health Reference Center Academic*, *Wiley Online Library*, and *Science in Context*. The library provides access to over 65,000 unique journal and newspaper titles in support of The Citadel's curricula. Electronic books are provided through e-library, and physical DVDs and the *Films on Demand* database offer over 1,000 relevant video resources. The library has additional holdings in related fields including Education, Psychology, Biology, and Business Administration.

All Citadel faculty and students may use interlibrary loan services at no charge to acquire books and journal articles not immediately accessible through the library. The library has reciprocal borrowing privileges through the Partnership Among South Carolina Academic Libraries (PASCAL) catalog of nearly 10,000,000 books.

A librarian is assigned to the HESS department as a collection and instruction liaison. Beyond this, the library considers every book, journal, film, and database purchase suggestion from students and faculty essential to the collection management process.

Remodeling projects in 2009 and 2012 have ensured that the library's capacity for effective study and collection space are maintained.

Accreditation, Approval, Licensure or Certification

Graduates of the B.S. in Exercise Science will be prepared to take the Health, Fitness Specialist Exam by the American College of Sports Medicine and the National Strength and Conditioning Association's Certified Strength and Conditioning Specialist Exam. These exams are highly regarded by experts in the field of exercise science and are important credentials to add to the student's portfolio.

Articulation

This program is offered only for the Corps of Cadets. The Citadel welcomes the transfer of students from Trident Tech into the Corps of Cadets to pursue this degree. While the Department of Health, Exercise and Sport Science has no formal articulation agreements with other institutions, our department philosophy encourages healthy and meaningful collaborations within The Citadel as well as with colleagues and organizations external to the College. For example, the HESS Department has robust collaborations with both the College of Charleston and the Medical University of South Carolina that include research as well as internships and field experiences for our students. Regarding our relationship with the Medical University of South Carolina, we send many of our pre-allied health students to complete field experience hours within the MUSC physical therapy program. In addition, a Citadel faculty member collaborates with the dental faculty at MUSC's School of Dentistry. Finally, our department is involved with the Charleston County initiative, "Lighten Up! Charleston," that promotes healthy lifestyles for all of Charleston residents by serving on the City of Charleston Mayor's Steering

Committee along with MUSC, College of Charleston, SC DHEC Region 7, Charleston County School District, and Roper-St. Francis Healthcare System.

Estimated Costs

Note: All library expenditures are centralized through Daniel Library. Costs are based on the 2011-12 budget of the Department of Health, Exercise, and Sport Science with an estimated 3.5% increase per year.

Costs to the Institution and Sources of Financing

ESTIMATED COSTS BY YEAR						
CATEGORY	1st	2nd	3rd	4th	5th	TOTALS
Program Administration	24,914	25,786	26,689	27,623	28,589	133,601
Faculty Salaries	265,930	275,238	284,871	294,841	305,160	1,426,040
Graduate Assistants	0	0	0	0	0	0
Clerical/Support Personnel	24,113	24,957	25,831	26,735	27,671	129,307
Supplies and Materials	23,908	24,745	25,611	26,507	27,435	128,206
Library Resources	0	0	0	0	0	0
Equipment	0	0	0	0	0	0
Facilities	0	0	0	0	0	0
Other (Identify)	0	0	0	0	0	0
TOTALS	338,865	350,726	363,002	375,706	388,855	1,817,154

SOURCES OF FINANCING BY YEAR						
Tuition Funding	23,908	24,745	25,611	26,507	27,435	128,206
Program-Specific Fees	0	0	0	0	0	0
State Funding*						
Reallocation of Existing Funds**	314,957	325,981	337,391	349,199	361,420	1,688,948
Federal Funding	0	0	0	0	0	0
Other Funding (Specify)	0	0	0	0	0	0
TOTALS	338,865	350,726	363,002	375,706	388,855	1,817,154

Institutional Approval

Since this program already exists at The Citadel as the CHE approved B.S. in Physical Education with Health and Wellness Concentration and this request to CHE involves the conversion of that program to the B. S. in Exercise Science, the institutional approval for this change required only the approval of the president and the provost which was reflected in their signatures on the Program Planning Summary submitted to CHE on 15 November 2011. When the B.S. in Exercise Science is approved, the B.S. in Physical Education with Concentration in Health and Wellness will no longer be offered.