Bachelor of Arts Degree with a Major in Health Sciences and Bachelor of Arts Degree with a Major in Sports Medicine and Exercise Physiology Proposal

Approved by the Faculty Senate

November 20, 2019

Date: **April 4, 2019**

To: **Peter Rossky, Dean, Wiess School of Natural Sciences**
***via* Ken Whitmire, Assoc. Dean for Academic Affairs,**
Wiess School of Natural Sciences

From: **Heidi Perkins, Chair, Department of Kinesiology, *and***
Nicholas Iammarino, Past Chair, Department of Kinesiology

Subject: **Proposal of two New Majors**
Reclassification of current Major with Major Concentrations
(KINE-Health Sciences and KINE-Sports Medicine) into separate Majors

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Dear Peter and Ken,

As you know, the Kinesiology Department currently offers one degree, a Bachelor of Arts (BA) degree with a major in Kinesiology and a major concentration in either Health Sciences or Sports Medicine. For many years our faculty has felt rather strongly that this designation does not accurately reflect the preparation and training of our students. More specifically and presently our students can select between two very distinct curricula (recognized as major concentrations): *Health Sciences* and *Sports Medicine*.

In recent conversations with Associate Vice President for Institutional Effectiveness and Institutional Research John Cornwell, he pointed out that Kinesiology is the only academic department in the Wiess School of Natural Sciences that does not meet or qualify as a STEM-associated degree program by the federal government. To be STEM-eligible our academic programs must have a CIP (classification of instructional program) code that has been designated a STEM area by the federal government. Our current major is "Kinesiology" (KINE) and students select between one of two major concentrations: *Health Sciences* or *Sports Medicine*. None of these terms/labels are listed as a CIP accepted program. This lack of STEM classification has several important implications including our international students and their Visas for study and work. Many US colleges and universities have made changes to their program names and curricula in order to be classified as a STEM program.

Currently the National Center for Education Statistics (NCES) Classification of Instructional Program CIP code for our academic programs are the following:

Kinesiology is listed as CIP code/title 31 (Exercise Science and Kinesiology) which is not considered a STEM major. However, CIP code 26 (Exercise Physiology and Kinesiology) carries STEM classification. The addition of Exercise Physiology, (a subset of Kinesiology) to our current Sports Medicine major concentration name would enable that program to be STEM-eligible, new name "Sports Medicine and Exercise Physiology".

More info can be found at: https://nces.ed.gov/ipeds/cipcode/

Furthermore, our graduates (particularly the Kinesiology majors with a major concentration in Health Science) have long argued that the BA degree with a major in Kinesiology does not truly reflect their training. These students for many years have petitioned us to split our two major concentrations into separate majors. The entire Kinesiology faculty has enthusiastically long-supported this separation. Thus, for these reasons, I am writing to formally request your aid in helping make this logical change to our current academic programs.

Background

By way of background and history, the two current programs that have been in place since 2001 are the result of the distillation and elimination of several "tracks," as well as the separation of the Sport Management curriculum into a separate major in 2008. As far back as 1987-88, the Department was one of the first universities in the nation to offer a separate track program in the Physical Education major. Originally, there were four designated areas of specialization, options or "tracks": exercise science, sports medicine, sport management, and teaching/coaching. Health education continued to be was offered as well, but only as a teaching field. In 1994, the fifth track program in Health Science was added to the original four, as there was a growing interest in public health. The removal of the teaching/coaching track from the department offerings took place in 1999, leaving only exercise science, health science, sports management, and sports medicine. Based on the recommendations from our External Review of 1998, the Department also merged the exercise science concentration in 2001 with sports medicine, leaving the current concentrations: Health Sciences, Sports Medicine, and Sport Management. Each of the three Kinesiology programs was very distinct and distinguishable from the other two concentrations. In the 2008-2009 academic year, Sport Management courses rubric became SMGT and separated from the Kinesiology (KINE) courses. It became a stand-alone major (BA degree with a major in Sport Management) following approval by the faculty senate and most recently its own department in 2013.

This curricular program separation has received positive comments and endorsements from a number of other Rice colleagues including David Tenney, Registrar; Brian Gibson, Senior Associate Dean of Undergraduates; and John Cornwell, Associate Vice President for Institutional Effectiveness, among others. In fact, both the Committee on Undergraduate Curriculum and Faculty Senate when approving the new Sport Management degree back in 2008 asked why we were not separating these two other programs at that time. Our then Dean, Gary Wihl (who also supported this separation) requested that we first obtain the new Sport Management major and then follow up in subsequent years with the separation of Health Sciences and Sports Medicine. However, due to our pending Departmental review, followed by our move to Natural Sciences, and then the departure of Dean Dan Carson, we were encouraged to postpone this request until a new Dean was in place.

Proposed

CURRENTLY:

Major: Kinesiology (KINE)	CIP Code/Title: *31.0505 - Kinesiology and Exercise Science*
Major Concentration: Health Sciences (KHSC)	CIP Code/Title: *51.0001 - Health and Wellness, General*
Major: Kinesiology (KINE)	CIP Code/Title: *31.0505 - Kinesiology and Exercise Science*
Major Concentration: Sports Medicine (KSPM)	CIP Code/Title: *31.0505 - Kinesiology and Exercise Science*

PROPOSED:

Major: Health Sciences	CIP Code/Title: *51.0001 - Health and Wellness, General*
Major: Sports Medicine and Exercise Physiology	CIP Code/Title: 26.*0908 – Exercise Physiology and Kinesiology*

Rationale

In summary, we are proposing updating and renaming the Sports Medicine major concentration so that it is a more accurate name (Sports Medicine and Exercise Physiology) and one which will qualify as a STEM program by the federal government. Second, we are proposing the separation of our two curricular programs into separate majors:

i.) the BA degree with a major in Health Sciences, and
ii.) the BA degree with a major in Sports Medicine and Exercise Physiology

We request this for the follow reasons:

1. This proposed change will bring our department in line with other departments and majors in the School of Natural Sciences as we now join them offering a STEM approved major
2. In actuality, both academic programs already exist and are not new programs.
3. We are **not** changing our program, the curriculum, or their specific course requirements.
4. This separation and change will better reflect the distinct nature of both programs.
5. Students have long requested this separation to better help distinguish their actual preparation, job search, or entry into professional or graduate programs.
6. This has been a logical evolution of our original "track" programs and reflects the changing nature of our disciplines nationally.
7. Most of our majors are also premeds, and thus, a *Sports Medicine and Exercise Physiology* major better reflects their course of study and interest while the term Kinesiology is still confusing to many. Similarly, for those whose interests and future careers are public health, the Kinesiology designation does little to reflect their unique preparation in the public health sciences.
8. If approved, over the short term, our existing major students will have the option of keeping Kinesiology or changing to one of these two new majors: ***Health Sciences*** or ***Sports Medicine and Exercise Physiology***.

Recommended

9 April 2019

Peter J. Rossky, Dean
Wiess School of Natural Sciences

Appendix A: Proposed General Announcement Text [Changes to Existing text → New Text]

~~Kinesiology~~ Health Sciences

Overview | Undergraduate | Graduate | Faculty | Courses | Codes

Rice's Kinesiology department is the home of two academic majors, i.) Health Sciences and ii.) Sports Medicine and Exercise Physiology. ~~was one of the first in the nation to institute an academic program structure that allows students to concentrate their efforts in a specific sub-discipline. Within the Kinesiology major, there are two distinct major concentrations: Health Sciences and Sports Medicine.~~

~~Major in Kinesiology and a Major Concentration in Health Sciences~~
Major in Health Sciences

The goal of the health sciences ~~program~~ major is to provide students with a fundamental background in health promotion and disease prevention. This background will enable them to understand the role that health promotion plays in society and the mechanisms that affect public and community health while also considering the complexities of maintaining an optimal level of personal health. The health science ~~program~~ major is viewed as an excellent option for undergraduate students who are preparing to enter graduate school in public health, health promotion, and health education, as well as other health-related graduate or professional programs such as medicine or dentistry.

~~Major in Kinesiology and a Major Concentration in Sports Medicine~~
Major in Sports Medicine and Exercise Physiology

The sports medicine and exercise physiology ~~curriculum~~ major intends to provide a strong natural science foundation and interface this foundation with application to the human body. ~~Prerequisite courses~~ Courses in biology and biochemistry, as well as an array of required and elective courses offered within the department provide this foundation. The sports medicine and exercise physiology ~~program~~ major is the only academic specialization on campus that provides detailed exposure to human anatomy and human physiology. In addition, students ~~receive~~ complete coursework in ~~foundations of Kinesiology,~~ research methods, motor learning, statistics, exercise physiology, and sports medicine. Practical experience is afforded through ~~several~~ academic labs. Other elective courses include epidemiology and exercise epidemiology, case studies in human performance, motor control, and advanced exercise physiology, ~~and preventive medicine~~ sports nutrition, medical terminology, and muscle physiology and plasticity. During advising sessions, students are encouraged to select from these electives according to their respective career goals. Students in the sports medicine and exercise physiology ~~program~~ major are expected to develop a strong scientific knowledge.

Students who choose the sports medicine and exercise physiology ~~program~~ major typically continue their education at the graduate level or plan on attending medical school or other medically related professional schools, such as physical therapy. Graduates also may be directly employed in medical and corporate settings, which include both preventative and rehabilitative programs. Graduates who choose not to seek post-baccalaureate education generally are encouraged to obtain certification for exercise testing, physical fitness evaluation, or exercise prescription through the American College of Sports Medicine ~~website~~ (ACSM).

~~Kinesiology~~ Health Sciences

Overview | **Undergraduate** | Graduate | Faculty | Courses | Codes

Bachelor's Programs

- Bachelor of Arts (BA) Degree with a Major in ~~Kinesiology~~ Health Sciences
  - ~~and a Major Concentration in Health Sciences~~
  - ~~and a Major Concentration in Sports Medicine~~

Bachelor of Arts (BA) Degree with a Major in Health Sciences ~~Kinesiology and a Major Concentration in Health Sciences~~

Outcomes | Requirements | Policies | Opportunities

Program Learning Outcomes for the BA Degree with a Major in Health Sciences ~~Kinesiology and a Major Concentration in Health Sciences~~

Upon completing the BA degree with a major in Health Sciences ~~Kinesiology and a major concentration in Health Science~~s, students will be able to:

1. Prepare and deliver presentations effectively and be able to use information technology.
2. Work and collaborate in groups toward a common goal.
3. Read, select, and interpret important information from health sciences literature. They will be able to design and conduct public health research studies using appropriate methodologies.
4. Promote public health education within the framework of legal, ethical, moral, and professional standards.
5. Collaborate with other professionals, staff, and communities in the planning and implementation, and evaluation of health education programs. They will be able to administer and manage health education programs, serve as a health education resource person, and communicate and advocate for health and health education.

Bachelor of Arts (BA) Degree with a Major in

Outcomes | | Policies | Opportunities

Requirements for the BA Degree with a Major in Health Sciences ~~Kinesiology and a Major Concentration in Health Sciences~~

For general university requirements, see Graduation Requirements. Students pursuing the BA degree with a major in Health Sciences ~~Kinesiology and a major concentration in Health Sciences~~ must complete:

- A minimum of 14 courses (42 credit hours) to satisfy major requirements.
- A minimum of 120 credit hours satisfy degree requirements.
- A minimum of 60 credit hours outside of major requirements.
- A minimum of 5 courses (15 credit hours) taken at the 300-level or above.
- ~~The requirements of a major concentration. When students declare the major in Kinesiology,~~
  - ~~Health Sciences, or~~
  - ~~Sports Medicine.~~

~~It is possible for students to change their major concentration at any time, even after initially declaring the major. To do so, please contact the Office of the Registrar.~~

The courses listed below satisfy the requirements for this major. In certain instances, courses not on this official list may be substituted upon approval of the major's academic advisor, or where applicable, the department's Director of Undergraduate Studies. (Course substitutions must be formally applied and entered into Degree Works by the major's Official Certifier.) Students and their academic advisors should identify and clearly document the courses to be taken.

Summary

Total Credit Hours Required for the Major in Health Sciences ~~Kinesiology and a Major Concentration in Health Sciences~~	42
Total Credit Hours Required for the BA Degree with a Major in Health Sciences ~~Kinesiology and a major concentration in Health Sciences~~	120

Degree Requirements

Core Requirements [1]		
Basic Math and Science Courses (Required Pre-Requisites)		
HEAL 222	PRINCIPLES OF PUBLIC AND COMMUNITY HEALTH	3
HEAL 313	FOUNDATIONS OF HEALTH PROMOTION AND EDUCATION	3
HEAL 407	EPIDEMIOLOGY	3

HEAL 422	THEORIES AND MODELS OF HEALTH BEHAVIOR	3
HEAL 460	PLANNING AND EVALUATION OF HEALTH PROMOTION AND EDUCATION	3
KINE 319	STATISTICS FOR THE HEALTH PROFESSIONAL	3
Elective Requirements		
Select 8 elective courses (see course list below)		24
Total Credit Hours Required for the Major in Health Sciences ~~Kinesiology and a major concentration in Health Sciences~~		**42**
Additional Credit Hours to Complete BA Degree Requirements		18
University Graduation Requirements *		60
Total Credit Hours		120

Footnotes and Additional Information

* Includes coursework completed as distribution credit, FWIS, LPAP, upper-level, residency (hours taken at Rice), 60 hours outside of the major (if applicable), and any additional academic program requirements. The "hours outside of the major" requirement may include all of the above university requirements.

[1] Core Requirements include an introductory course designed to acquaint students with the fundamental concepts of personal health and models of health promotion, understanding and assessing community health needs, methods of understanding the disease process, a course that introduces statistics, a professional preparation course that introduces students to the profession, theories and models commonly used in health promotion research and practice, and an application course in which students plan a health promotion program.

Elective Requirements

To fulfill the elective requirements for the Major in Health Sciences ~~Kinesiology and a major concentration in Health Sciences~~, students must complete a total of 8 elective courses (minimum of 24 credit hours) from the course list below. This list of electives is drawn from course offerings that are both within the Department of Kinesiology and, at present, more than 20 courses from other academic departments at Rice. In keeping with the university's interest in an interdisciplinary approach to undergraduate education, this allows students to choose health-related courses from within the schools of natural sciences, social sciences, and humanities.

Elective Requirements		
Select 8 courses from the following:		24
ANTH 381	MEDICAL ANTHROPOLOGY	
ANTH 386	MEDICAL ANTHROPOLOGY OF FOOD AND HEALTH	
ANTH 446	ADVANCED TOPICS IN BIOMEDICAL ANTHROPOLOGY	
BIOC 122	BIOLOGY FOR VOTERS	
BIOC 201	INTRODUCTORY BIOLOGY	
BIOE 360 / GLHT 360	APPROPRIATE DESIGN FOR GLOBAL HEALTH	
ECON 481	HEALTH ECONOMICS	
ENGL 272	LITERATURE AND MEDICINE	
ENGL 273 / SWGS 273	MEDICINE AND MEDIA	
ENST 315	ENVIRONMENTAL HEALTH	
GLHT 201	INTRODUCTION TO GLOBAL HEALTH	
HEAL 103	NUTRITION	
HEAL 119	INTRODUCTION TO HEALTH AND WELLNESS	
HEAL 132	MEDICAL TERMINOLOGY	
HEAL 208	CHEMICAL ALTERATIONS OF BEHAVIOR	
HEAL 212	CONSUMER HEALTH AND THE MEDIA	
HEAL 306 / SWGS 306	HUMAN SEXUALITY	
HEAL 350	UNDERSTANDING CANCER	
HEAL 360	VIOLENCE IN AMERICA: A PUBLIC HEALTH PERSPECTIVE	
HEAL 375	THE BUILT ENVIRONMENT AND PUBLIC HEALTH	

HEAL 379	INTERNSHIP IN HEALTH SCIENCES
HEAL 380	DISPARITIES IN HEALTH IN AMERICA
HEAL 495	INDEPENDENT RESEARCH IN HEALTH SCIENCES
HEAL 498	SPECIAL TOPICS IN HEALTH SCIENCES
KINE 300	HUMAN ANATOMY WITH LAB
KINE 301	HUMAN PHYSIOLOGY
KINE 326	EXERCISE EPIDEMIOLOGY
KINE 440	RESEARCH METHODS
MDHM 201	INTRODUCTION TO MEDICAL HUMANITIES
PHIL 314	THE PHILOSOPHY OF MEDICINE
PHIL 315	ETHICS, MEDICINE, AND PUBLIC POLICY
PHIL 336	TOPICS IN MEDICAL ETHICS
POLI 329	HEALTH POLICY
PSYC 345	HEALTH PSYCHOLOGY
PSYC 346	STRESS AND HEALTH ACROSS THE LIFESPAN
SOCI 313	DEMOGRAPHY
SOCI 345	MEDICAL SOCIOLOGY
SOCI 465 / SWGS 465	GENDER AND HEALTH
SOSC 330	HEALTH CARE REFORM IN THE 50 STATES

Bachelor of Arts (BA) Degree with a Major in Health Sciences ~~Kinesiology and a Major Concentration in Health Sciences~~

Policies for the BA Degree with a Major in Health Sciences ~~Kinesiology and a Major Concentration in Health Sciences~~

Transfer Credit

For Rice University's policy regarding transfer credit, see Transfer Credit. Some departments and programs have additional restrictions on transfer credit. The Office of Academic Advising maintains the university's official list of transfer credit advisors on their website: https://oaa.rice.edu. Students are encouraged to meet with their academic program's transfer credit advisor when considering transfer credit possibilities.

Departmental Transfer Credit Guidelines

Students pursuing the major in Health Sciences ~~Kinesiology~~ should be aware of the following departmental transfer credit guidelines:

- Requests for transfer credit will be considered by the program director (and/or the program's official transfer credit advisor) on an individual case-by-case basis.

Additional Information

For additional information, please see the Kinesiology website: https://kinesiology.rice.edu/

Bachelor of Arts (BA) Degree with a Major in Health Sciences ~~Kinesiology and a Major Concentration in Health Sciences~~

Opportunities for the BA Degree with a Major in Health Sciences ~~Kinesiology and a Major Concentration in Health Sciences~~

Academic Honors

The university recognizes academic excellence achieved over an undergraduate's academic history at Rice. For information on university honors, please see Latin Honors (*summa cum laude*, *magna cum laude*, and *cum laude*) and Distinction in Research and Creative Work. Some departments have department-specific Honors awards or designations.

Unique Program: Rice-UTSPH Public Health Scholars

Rice undergraduate students interested in pursuing a Master of Public Health (MPH) degree at the University of Texas School of Public Health (UTSPH) may apply to the Rice-UT Public Health Scholars Program. This unique coordinated program enables accepted Rice students to earn credit towards their Rice undergraduate degree (BA or BS with any major), and to accelerate in the completion of their UTSPH Master of Public Health degree to within one year after completing their Rice undergraduate degree.

For more information on the Rice-UTSPH program, please see the program's website: https://dou.rice.edu/student-resources/public-health-scholars-program.

Additional Information

For additional information, please see the Kinesiology website: https://kinesiology.rice.edu/

Appendix B: Proposed General Announcement Text [Changes to Existing text → New Text]

~~Kinesiology~~ Sports Medicine and Exercise Physiology

Overview | Undergraduate | Graduate | Faculty | Courses | Codes

Rice's Kinesiology department is the home of two academic majors, i.) Health Sciences and ii.) Sports Medicine and Exercise Physiology. ~~was one of the first in the nation to institute an academic program structure that allows students to concentrate their efforts in a specific sub-discipline. Within the Kinesiology major, there are two distinct major concentrations: Health Sciences and Sports Medicine~~.

~~**Major in Kinesiology and a Major Concentration in Health Sciences**~~
Major in Health Sciences

The goal of the health sciences ~~program~~ major is to provide students with a fundamental background in health promotion and disease prevention. This background will enable them to understand the role that health promotion plays in society and the mechanisms that affect public and community health while also considering the complexities of maintaining an optimal level of personal health. The health science ~~program~~ major is viewed as an excellent option for undergraduate students who are preparing to enter graduate school in public health, health promotion, and health education, as well as other health-related graduate or professional programs such as medicine or dentistry.

~~**Major in Kinesiology and a Major Concentration in Sports Medicine**~~
Major in Sports Medicine and Exercise Physiology

The sports medicine and exercise physiology ~~curriculum~~ major intends to provide a strong natural science foundation and interface this foundation with application to the human body. ~~Prerequisite courses~~ Courses in biology and biochemistry, as well as an array of required and elective courses offered within the department provide this foundation. The sports medicine and exercise physiology ~~program~~ major is the only academic specialization on campus that provides detailed exposure to human anatomy and human physiology. In addition, students ~~receive~~ complete coursework in ~~foundations of Kinesiology,~~ research methods, motor learning, statistics, exercise physiology, and sports medicine. Practical experience is afforded through ~~several~~ academic labs. Other elective courses include epidemiology and exercise epidemiology, case studies in human performance, motor control, and advanced exercise physiology, ~~and preventive medicine~~ sports nutrition, medical terminology, and muscle physiology and plasticity. During advising sessions, students are encouraged to select from these electives according to their respective career goals. Students in the sports medicine and exercise physiology ~~program~~ major are expected to develop a strong scientific knowledge.

Students who choose the sports medicine and exercise physiology ~~program~~ major typically continue their education at the graduate level or plan on attending medical school or other medically related professional schools, such as physical therapy. Graduates also may be directly employed in medical and corporate settings, which include both preventative and rehabilitative programs. Graduates who choose not to seek post-baccalaureate education generally are encouraged to obtain certification for exercise testing, physical fitness evaluation, or exercise prescription through the American College of Sports Medicine ~~website~~ (ACSM).

~~Kinesiology~~ Sports Medicine and Exercise Physiology

Overview | **Undergraduate** | Graduate | Faculty | Courses | Codes

Bachelor's Programs

- Bachelor of Arts (BA) Degree with a Major in ~~Kinesiology~~ Sports Medicine and Exercise Physiology
    - ~~and a Major Concentration in Health Sciences~~
    - ~~and a Major Concentration in Sports Medicine~~

Bachelor of Arts (BA) Degree with a Major in Sports Medicine and Exercise Physiology ~~Kinesiology and a Major Concentration in Sports Medicine~~

Outcomes | Requirements | Policies | Opportunities

Program Learning Outcomes for the BA Degree with a Major in Sports Medicine and Exercise Physiology ~~Kinesiology and a Major Concentration in Sports Medicine~~

Upon completing the BA degree with a major in Sports Medicine and Exercise Physiology ~~Kinesiology and a major concentration in Sports Medicine~~, students will be able to:

1. Prepare and deliver presentations effectively and be able to use information technology.
2. Work and collaborate in groups toward a common goal.
3. Read, select, and interpret important information from sports sciences literature. They will be able to design and conduct research studies using appropriate methodologies.
4. Identify and apply ethical standards to the design and execution of research studies.
5. Understand principles of human nutrition and its application to exercise and sport.
6. Understand the principles of sports psychology.
7. Be knowledgeable of anatomy relevant to sport, exercise, and sport injury. They will develop an understanding of principles of biomechanics applied to exercise and sporting activities. Students will be knowledgeable of prevention, diagnosis, and treatment of injuries and diseases related to exercise and sports.
8. Collect and analyze data in a motor learning, exercise physiology, or other sports medicine lab settings.

Bachelor of Arts (BA) Degree with a Major in

Outcomes | | Policies | Opportunities

Requirements for the BA Degree with a Major in Sports Medicine and Exercise Physiology ~~Kinesiology and a Major Concentration in Sports Medicine~~

For general university requirements, see Graduation Requirements. Students pursuing the BA degree with a major in Sports Medicine and Exercise Physiology ~~Kinesiology and a major concentration in Sports Medicine~~ must complete:

- A minimum of 15 courses (44 credit hours) to satisfy major requirements.
- A minimum of 120 credit hours satisfy degree requirements.
- A minimum of 60 credit hours outside of major requirements.
- A minimum of 9 courses (26 credit hours) taken at the 300-level or above.
- ~~The requirements of a major concentration. When students declare the major in Kinesiology, students must additionally identify and declare one of two major concentrations, either in:~~
  - ~~Health Sciences, or~~
  - ~~_____~~

~~It is possible for students to change their major concentration at any time, even after initially declaring the major. To do so, please contact the Office of the Registrar.~~

The courses listed below satisfy the requirements for this major. In certain instances, courses not on this official list may be substituted upon approval of the major's academic advisor, or where applicable, the department's Director of Undergraduate Studies. (Course substitutions must be formally applied and entered into Degree Works by the major's Official Certifier.) Students and their academic advisors should identify and clearly document the courses to be taken.

Summary

Total Credit Hours Required for the Major in Sports Medicine and Exercise Physiology ~~Kinesiology and a Major Concentration in Sports Medicine~~	44
Total Credit Hours Required for the BA Degree with a Major in Sports Medicine and Exercise Physiology ~~Kinesiology and a Major Concentration in Sports Medicine~~	120

Degree Requirements

Core Requirements [1]		
Basic Math and Science Courses (Required Pre-Requisites)		
HEAL 103	NUTRITION	3

KINE 300	HUMAN ANATOMY WITH LAB	4
KINE 301	HUMAN PHYSIOLOGY	3
KINE 302	BIOMECHANICS	3
KINE 310	PSYCHOLOGICAL ASPECTS OF SPORT AND EXERCISE	3
KINE 311	MOTOR LEARNING	3
KINE 319	STATISTICS FOR THE HEALTH PROFESSIONAL	3
KINE 321	EXERCISE PHYSIOLOGY	3
KINE 323	EXERCISE PHYSIOLOGY LABORATORY	1
KINE 440	RESEARCH METHODS	3
Elective Requirements		
Select 5 elective courses (see course list below)		15
Total Credit Hours Required for the Major in Sports Medicine and Exercise Physiology ~~Kinesiology and a Major Concentration in Sports Medicine~~		**44**
Additional Credit Hours to Complete BA Degree Requirements		16
University Graduation Requirements *		60
Total Credit Hours		120

Footnotes and Additional Information

* Includes coursework completed as distribution credit, FWIS, LPAP, upper-level, residency (hours taken at Rice), 60 hours outside of the major (if applicable), and any additional academic program requirements. The "hours outside of the major" requirement may include all of the above university requirements.

[1] The Core Requirements include detailed exposure to human anatomy and human physiology. In addition, students receive coursework in research methods, motor learning, statistics, exercise physiology, and sports psychology.

Elective Requirements

To fulfill the elective requirements for the Major in Sports Medicine and Exercise Physiology ~~Kinesiology and a Major Concentration in Sports Medicine~~, students must complete a total of 5 elective courses (minimum of 15 credit hours) from the course list below. This list of electives is drawn from course offerings that are both within the Department of Kinesiology and other academic departments. Kinesiology elective courses include epidemiology, case studies in human performance, motor control, advanced exercise physiology and preventive medicine, sports nutrition, medical terminology and muscle physiology and plasticity. Electives from other departments include courses in chemistry, physics, biology and biochemistry, which may also be utilized as medical school prerequisites.

Elective Requirements		
Select 5 courses from the following:		15
BIOC 201	INTRODUCTORY BIOLOGY	
BIOC 211	INTERMEDIATE EXPERIMENTAL BIOSCIENCES	
BIOC 301	BIOCHEMISTRY I	
BIOC 302	BIOCHEMISTRY II	
BIOC 311	ADVANCED EXPERIMENTAL BIOSCIENCES	
BIOE 313	EXPERIMENTAL SYNTHETIC BIOLOGY	
BIOC 372	IMMUNOLOGY	
CHEM 121 or CHEM 111	GENERAL CHEMISTRY I [1] AP/OTH CREDIT IN GENERAL CHEMISTRY I	
CHEM 123 or CHEM 113	GENERAL CHEMISTRY LABORATORY I [1] AP/OTH CREDIT IN GENERAL CHEMISTRY LAB I	
CHEM 122 or CHEM 112	GENERAL CHEMISTRY II [1] AP/OTH CREDIT IN GENERAL CHEMISTRY II	
CHEM 124 or CHEM 114	GENERAL CHEMISTRY LABORATORY II [1] AP/OTH CREDIT IN GENERAL CHEMISTRY LAB II	
EBIO 202	INTRODUCTORY BIOLOGY II	
HEAL 132	MEDICAL TERMINOLOGY	
HEAL 407	EPIDEMIOLOGY	

KINE 120	SCIENTIFIC FOUNDATIONS OF KINESIOLOGY
KINE 326	EXERCISE EPIDEMIOLOGY
KINE 351	ADVANCED HUMAN ANATOMY LAB
KINE 375	SPORTS MEDICINE INTERNSHIP
KINE 403	SPORT NUTRITION
KINE 410	CASE STUDIES IN HUMAN PERFORMANCE
KINE 412	MOTOR CONTROL
KINE 415	PSYCHOLOGICAL ASPECTS OF SPORTS INJURY & REHABILITATION
KINE 421	ADVANCED TOPICS IN EXERCISE PHYSIOLOGY AND PREVENTIVE MEDICINE
KINE 430	SPORTS INJURY: EVALUATION, MANAGEMENT, AND TREATMENT
KINE 495	INDEPENDENT RESEARCH IN SPORTS MEDICINE
KINE 498	SPECIAL TOPICS IN SPORTS MEDICINE
KINE 499	TEACHING PRACTICUM IN SPORTS MEDICINE
PHYS 101 & PHYS 103	MECHANICS (WITH LAB) and MECHANICS DISCUSSION
PHYS 102 & PHYS 104	ELECTRICITY & MAGNETISM (WITH LAB) and ELECTRICITY AND MAGNETISM DISCUSSION
PHYS 125	GENERAL PHYSICS (WITH LAB)
PHYS 126	GENERAL PHYSICS II (WITH LAB)
PSYC 202	INTRODUCTION TO SOCIAL PSYCHOLOGY
PSYC 203	INTRODUCTION TO COGNITIVE PSYCHOLOGY
PSYC 321	DEVELOPMENTAL PSYCHOLOGY

Footnotes and Additional Information

[1] CHEM 151 may be substituted for CHEM 121 or CHEM 111; CHEM 153 may be substituted for CHEM 123 or CHEM 113; CHEM 152 may be substituted for CHEM 122 or CHEM 112, and CHEM 154 may be substituted for CHEM 124 or CHEM 114.

Bachelor of Arts (BA) Degree with a Major in Sports Medicine and Exercise Physiology ~~Kinesiology and a Major Concentration in Sports Medicine~~

Outcomes | Requirements | **Policies** | Opportunities

Policies for the BA Degree with a Major in Sports Medicine and Exercise Physiology ~~Kinesiology and a Major Concentration in Sports Medicine~~

Transfer Credit

For Rice University's policy regarding transfer credit, see Transfer Credit. Some departments and programs have additional restrictions on transfer credit. The Office of Academic Advising maintains the university's official list of transfer credit advisors on their website: https://oaa.rice.edu. Students are encouraged to meet with their academic program's transfer credit advisor when considering transfer credit possibilities.

Departmental Transfer Credit Guidelines

Students pursuing the major in Sports Medicine and Exercise Physiology ~~Kinesiology~~ should be aware of the following departmental transfer credit guidelines:

- Requests for transfer credit will be considered by the program director (and/or the program's official transfer credit advisor) on an individual case-by-case basis.

Additional Information

For additional information, please see the Kinesiology website: https://kinesiology.rice.edu/

Bachelor of Arts (BA) Degree with a Major in Sports Medicine and Exercise Physiology ~~Kinesiology and a Major Concentration in Health Sciences~~

Opportunities for the BA Degree with a Major in Sports Medicine and Exercise Physiology ~~Kinesiology and a Major Concentration in Sports Medicine~~

Academic Honors

The university recognizes academic excellence achieved over an undergraduate's academic history at Rice. For information on university honors, please see Latin Honors (*summa cum laude*, *magna cum laude*, and *cum laude*) and Distinction in Research and Creative Work. Some departments have department-specific Honors awards or designations.

Unique Program: Rice-UTSPH Public Health Scholars

The university recognizes academic excellence achieved over an undergraduate's academic history at Rice. For information on university honors, please see Latin Honors (*summa cum laude*, *magna cum laude*, and *cum laude*) and Distinction in Research and Creative Work. Some departments have department-specific Honors awards or designations.

Additional Information

For additional information, please see the Kinesiology website: https://kinesiology.rice.edu/

The Kinesiology Department proposes the separation of our two curricular programs into separate majors:

i.) the BA degree with a major in Health Sciences, and
ii.) the BA degree with a major in Sports Medicine and Exercise Physiology

In summary, we request this for the follow reasons:

- This separation and change will better reflect the distinct nature of both programs.
- Students have long requested this separation to better help distinguish their actual preparation, job search, or entry into professional or graduate programs.
- This has been a logical evolution of our original "track" programs and reflects the changing nature of our disciplines nationally.
- Both academic programs already exist and are not new programs.
- We are **not** changing our program, the curriculum, or their specific course requirements.
- Most of our majors are also premeds, and thus, a *Sports Medicine and Exercise Physiology* major better reflects their course of study and interest while the term Kinesiology is still confusing to many. Similarly, for those whose interests and future careers are public health, the Kinesiology designation does little to reflect their unique preparation in the public health sciences.
- If approved, over the short term, our existing major students will have the option of keeping Kinesiology or changing to one of these two new majors: ***Health Sciences*** or ***Sports Medicine and Exercise Physiology***.

The CUC asked for examples of programs that are similar to the Sports Medicine Concentration at Rice. We have provided a list of courses with descriptions that are offered at Rice. In addition, we have included course lists from three Kinesiology programs (Pepperdine University, University of Michigan, and Auburn University) for comparison. Common coursework includes: Anatomy, Anatomy lab, Human Physiology, Exercise Physiology, Exercise Physiology Lab, Motor learning, Sport and Exercise Psychology and Biomechanics. The list of courses does not include general university requirements or prerequisites, but provides a list of courses typically offered in the discipline.

Rice University
Program located in the School of Natural Sciences
Current: BA degree with a major in 'Kinesiology' with a major concentration in 'Sports Medicine'
Proposed: BA degree with a major in 'Sports Medicine and Exercise Physiology'

KINE 120 - SCIENTIFIC FOUNDATIONS OF KINESIOLOGY
Description: An introduction to studies in the areas of human movement: anatomy and physiology, exercise physiology, biomechanics, motor learning and control, and psychological aspects of sport and exercise.

KINE 238 - SPECIAL TOPICS
Description: Topics and credit hours vary each semester. Contact department for current semester's topic(s). Repeatable for Credit.

KINE 300 - HUMAN ANATOMY WITH LAB
Description: An introduction to normal human anatomy structure and function. All major body systems will be examined in both lecture and laboratory format using a variety of physical and virtual models.

KINE 301 - HUMAN PHYSIOLOGY
Description: This course will address the fundamental principles of human physiology at the cell, tissue, organ, organ system, and organism levels. Emphasis will be placed on mechanisms of function and homeostasis as achieved through the coordinated function of homeostatic control systems.

KINE 302 - BIOMECHANICS
Prerequisite(s): KINE 300
Description: An introduction to the discipline of mechanics as it applies to biological systems. Primary emphasis is placed on humans and other vertebrate species. Topics covered include the kinematics and kinetics of movement, material and functional properties of musculoskeletal tissues and the integration of musculoskeletal function from molecules and cells to whole animals. Recommended prerequisites(s): KINE321.

KINE 310 - PSYCHOLOGICAL ASPECTS OF SPORT AND EXERCISE
Description: Examine the psychological foundations that underlie sport and exercise participation. Recommended Prerequisite(s): PSYC 101.

KINE 311 - MOTOR LEARNING
Description: Designed to provide a basic understanding of the theories related to skill acquisition, development, and movement. Learners develop an understanding of the cognitive, behavioral, and neurological concepts needed to become skilled at movements. The course will also incorporate laboratory experiences in the physiological, neurological, and psychological factors of human movement.

KINE 319 - STATISTICS FOR THE HEALTH PROFESSIONAL
Description: Topics include displaying and describing data, the normal curve, regression, statistical inference including parametric and non-parametric analyses, and hypothesis testing. Students also have the opportunity to analyze data using SPSS and Excel software.

KINE 321 - EXERCISE PHYSIOLOGY
Prerequisite(s): KINE 300 and KINE 301
Corequisite: KINE 323
Description: This course examines the acute and chronic effects of exercise on physiological functions. Topics include nutrition, energy transfer, fatigue, metabolism, disease, aging, preventative medicine, genetics, elite performance, ergogenic aids, exercise testing, and specificity of training.

KINE 323 - EXERCISE PHYSIOLOGY LABORATORY
Prerequisite(s): KINE 300 and KINE 301
Description: This course introduces the concepts and assessment techniques used to quantify physiological function. Laboratory experiences will require students to acquire and apply knowledge of systems physiology to make direct functional assessments using themselves as subjects. A major emphasis will be placed on metabolism and energy transfer in the body. Cardiovascular, musculoskeletal, and central nervous system function will also be covered. Individual body composition, musculoskeletal levers, metabolic power and fitness, and neuromuscular control and coordination.

KINE 326 - EXERCISE EPIDEMIOLOGY
Description: This course provides an epidemiological foundation to exercise and physical activity research related to public health. The course is designed to present evidence of the positive effects of physical activity and exercise in preventing disease, disability, and increasing quality of life. Recommended Prerequisite(s): KINE 321 and KINE 323.

KINE 351 - ADVANCED HUMAN ANATOMY LAB
Prerequisite(s): KINE 300
Description: Study of the pro-sections and cadavers are used for learning and understanding human anatomy in a gross anatomy examination laboratory at BCM in the Texas Medical Center. Hands-on examination of human anatomy in this course provides supplemental practical experience for lectures in KINE 300, Human Anatomy courses.

KINE 375 - SPORTS MEDICINE INTERNSHIP
Description: Internship experience for upperclassmen in the sports medicine concentration. Department Permission Required. Repeatable for Credit.

KINE 403 - SPORT NUTRITION
Prerequisite(s): HEAL 103
Description: This course will address current scientific knowledge about common macronutrients, micronutrients, and supplements, and how they may enhance athletic performance. The course will also focus on the role of nutritional timing, volume, and periodization to achieve practical results in endurance, strength, power and speed. Recommended perquisite: KINE 321.

KINE 410 - CASE STUDIES IN HUMAN PERFORMANCE
Description: An advanced, multidisciplinary consideration of how humans perform. Class work will center around problem solving using a case study methodology.

KINE 412 - MOTOR CONTROL
Prerequisite(s): KINE 311
Description: Exploration of the neurophysiological, behavioral, and biomechanical aspects of human movement and development.

KINE 415 - PSYCHOLOGICAL ASPECTS OF SPORTS INJURY & REHABILITATION
Description: This course examines the psychological factors involved in sport-related injuries and the rehabilitation process. Topics include personal and situational factors influencing injury and recover, adherence to rehabilitation programs, social support, returning to play after injury, and the application of psychological interventions to optimize the recovery process. Recommended Prerequisite(s): KINE 310

KINE 421 - ADVANCED TOPICS IN EXERCISE PHYSIOLOGY AND PREVENTIVE MEDICINE
Prerequisite(s): KINE 321 and KINE 323
Description: This course is a seminar style course that examines acute and chronic effects of exercise stimuli on physiological adaptation as relevant to health, disease and human performance. Topics will vary depending on current issues in exercise physiology. Examples include metabolism, fatigue, diabetes, genetics, muscular dystrophy, orthopedics, cancer and cardiovascular disease. The course is intended for those with a background in biology and/or physiology and interest in exercise and health.

KINE 430 - SPORTS INJURY: EVALUATION, MANAGEMENT, AND TREATMENT
Prerequisite(s): KINE 300
Description: Upper level course designed to provide students with practical application of basic science knowledge obtained in lower level courses within the department of Kinesiology. The course will address the management of common sports injuries from time of injury to return to play. At the end of the course, students will have a comprehensive understanding of athletic injuries and their management.

KINE 440 - RESEARCH METHODS
Prerequisite(s): KINE 319
Description: Designed to introduce students to research methods, statistical techniques, and topics appropriate for experimental research.

KINE 441 – MUSCLE PHYSIOLGOY AND PLASTICITY
Prerequisites(s): KINE 321 and KINE 323
Description: This course will specifically address cardiac and skeletal muscle physiology and plasticity when introduced to various stimuli. These stimuli include exercise, aging, injury, altitude microgravity, heat and pharmacological agents. An emphasis will be placed on practical application to health disease and performance enhancement.

KINE 477 - SPECIAL TOPICS
Description: Topics and credit hours may vary each semester. Contact department for current semester's topic(s). Repeatable for Credit.

KINE 490 - SEMINAR IN SPORTS MEDICINE
Description: Considers issues related to athletic injury including mechanisms, assessment, management, and rehabilitation.

KINE 495 - INDEPENDENT RESEARCH IN SPORTS MEDICINE
Prerequisite(s): KINE 319 and KINE 440
Description: To provide the student with an opportunity to participate in a research project under the supervision of a Rice Kinesiology faculty member and/or an external researcher. Department Permission Required. Recommended

KINE 498 - SPECIAL TOPICS IN SPORTS MEDICINE
Prerequisite(s): KINE 300, KINE 301, KINE 311
Description: This course offers an in-depth look into selected developmental, degenerative, and hyperkinetic movement disorders resulting in abnormal muscle tone and/or motor control. Multiple aspects of each disorder (presentation, treatment, and progression) will be considered through a variety of sources. Spring 2019 Topic: Movement Disorders. Repeatable for Credit.

KINE 499 - TEACHING PRACTICUM IN SPORTS MEDICINE
Description: Advanced teaching experience for upper level students who have demonstrated particular aptitude and interest in one area of kinesiology. Students will assist in conducting a course in which they have previously excelled. The student will learn techniques in course management, instruction, and evaluation. Department Permission Required. Recommended prerequisite(s): Junior or Senior standing, declared major in Kinesiology, and at least an "A-" in the course serving as the practicum. Repeatable for Credit.

Pepperdine University
Program located in Seaver School of Letters, Arts and Sciences
Degree: BA in Sports Medicine

SPME 110 Introduction to Exercise Sciences
BIOL 230 Human Anatomy
BIOL 270 Principles of Human Physiology
SPME 250 Motor Development and Learning
NTR 340 Sports Nutrition
SPME 320 Psychology of Exercise
SPME 330 Musculoskeletal Anatomy and Kinesiology
SPME 360Physiology of Exercise
SPME 430 Biomechanics of Human Movement
SPME 440 Neuromuscular Adaptations to Training
SPME45-0 Foundations of Health and Fitness
SPME 460 Exercise in Health and Disease
SPME 498 Health and Exercise Fitness Internship

University of Michigan
Program located in the School of Kinesiology
BS Applied Exercise Science

AES 100 Introduction to Applied Exercise Science
AES 218 Emergency Response
AES 220 Applied Human Anatomy and Physiology
AES 240 Introduction to Fitness & Health
AES 241 Exercise, Nutrition and Weight
AES 242 Essentials of Exercise Physiology
AES 251 Technology in Applied Exercise
AES 270 Honors Reading
AES 280 Undergraduate Research Opportunity
AES 290 Field Experience in Applied Exercise Science
AES 313 Special Topics
AES 315 Exercise Prescription and Testing
AES 331 Biomechanics of Sport and Fitness
AES 332 Principles of Motor Behavior
AES 333 Legal and Ethical Issues in Sport
AES 370 Honors Reading
AES 380 Honors Research
AES 402 Teaching Experience for AES Students
AES 403 Internship in Applied Exercise Science
AES 416 Environmental and Policy Approaches to Increasing Physical Activity
AES 425 Physical Activity and Pediatric Disabilities
AES 434 Managerial Ethics in the Sport and Fitness Industries
AES 437 Psychological Aspects of Sport and Exercise
AES 446 The Role of Social Factors in Shaping Physical Activity Behavior

AES 451 Physical Activity across the Lifespan
AES 470 Independent Study

Auburn University
Program located in the College of Education
BS in Exercise Science

KINE 3020 Scientific Foundations of Kinesiology
KINE 3050 Care and Prevention of Injuries
KINE 3620 Biomechanical Analysis of Human Movement
KINE 3621 Biomechanical Analysis of Human Movement Lab
KINE 3650 Motor Learning and Performance
KINE 3651 Motor Learning and Performance Lab
KINE 3680 Physiology of Exercise
KINE 3681 Physiology of Exercise Lab
KINE 4620 Exercise and Sport Psychology
KINE 4760 Introduction to Exercise Science Research
KINE 4720 Measurement and Quantitative Analysis in Exercise Science
KINE 4780 Exercise Science Research

Note: Human Anatomy and Human Physiology courses are offered through another department.