Executive Summary

Request for Authorization to Implement Undergraduate Minor in Sports Nutrition

<table>
<thead>
<tr>
<th>Requested by</th>
<th>Nutritional Sciences in the College of Agriculture and Life Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIP Code</td>
<td>19.0501 Foods, Nutrition, and Wellness Studies, General</td>
</tr>
<tr>
<td>Purpose of Program</td>
<td>The sports nutrition minor will allow qualified students to focus their education in the area of sports nutrition. Sports nutrition is a growing field and is a specialization within the scope of a nutrition practice. The fundamental nutritional science and background needed by students is similar to that of non-specialized nutrition majors. However, athletes have nutrition requirements, issues, and practices that differ from the general population. Students who complete a sports nutrition minor will have a better understanding of these differences and will be able to adapt basic nutrition concepts to meet the needs of athletes. This minor would be open to all interested main-campus undergraduate students excluding Nutritional Science students. The sports nutrition minor provides a very focused list of course offerings that provide an in-depth education in the area of nutrition specific to athletic performance. The sports nutrition minor would require a minimum of 19 credit hours with 16 of those hours coming from upper division classes. There are five required courses (13 credit hours) and ten electives courses of which students must pick two (6 credit hours). At the conclusion of this program of study students should know, understand, and/or be able to: •Have a general understanding of metabolism and the nutrients involved in creating energy for sports performance. •Understand the physical demands of different sports and how those demands create nutrition challenges for athletes. •Identify nutrition issues that could affect physical performance. •Create education materials for athletes on various sports nutrition related topics. •Assess an athlete’s diet and recommend changes. •Collect body composition data and make assessments.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>5-year projected annual enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st year</td>
</tr>
<tr>
<td>50</td>
</tr>
<tr>
<td>Source(s) of Funding</td>
</tr>
<tr>
<td>----------------------</td>
</tr>
</tbody>
</table>

**Approvals:**

<table>
<thead>
<tr>
<th>Source</th>
<th>Approval Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABOR</td>
<td>N/A</td>
</tr>
<tr>
<td>Undergraduate Council</td>
<td>10/10/2017</td>
</tr>
<tr>
<td>Graduate Council</td>
<td>N/A</td>
</tr>
<tr>
<td>CAAC</td>
<td>8/22/2017</td>
</tr>
<tr>
<td>Provost’s Council</td>
<td>pending 10/23/2017 meeting</td>
</tr>
<tr>
<td>Faculty Senate</td>
<td></td>
</tr>
</tbody>
</table>
I. PROGRAM NAME, DESCRIPTION AND CIP CODE

A. PROPOSED PROGRAM NAME AND DEGREE(S) TO BE OFFERED – for PhD programs indicate whether a terminal Master’s degree will also be offered.

- Sports Nutrition Minor

B. CIP CODE – go to the National Statistics for Education web site (http://nces.ed.gov/ipeds/cipcode/browse.aspx?v=55) to select an appropriate CIP Code or contact Pam Coonan (621-0950) coonan@email.arizona.edu for assistance.

<table>
<thead>
<tr>
<th>CIP Code: 19.0501</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title: Foods, Nutrition, and Wellness Studies, General.</td>
</tr>
<tr>
<td>Definition: A general program that focuses on the role of foods and nutrition in human health and wellness. Includes instruction in nutritional care and education, the planning and provision of food services, the development of consumable food products, life-span nutrition and wellness, the principles of nutritional assessment, and food safety and food composition.</td>
</tr>
</tbody>
</table>

C. DEPARTMENT/UNIT AND COLLEGE – indicate the managing dept/unit and college for multi-interdisciplinary programs with multiple participating units/colleges.

Managing Department: Nutritional Sciences in the College of Agriculture and Life Sciences.

Campus and Location Offering – indicate by highlighting in yellow the campus(es) and location(s) where this program will be offered.

<table>
<thead>
<tr>
<th>UA South Campus</th>
<th>UA Main</th>
<th>UA Online</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sierra Vista</td>
<td>Tucson</td>
<td>Online</td>
</tr>
<tr>
<td>Douglas</td>
<td>Phoenix</td>
<td>Distance Campus</td>
</tr>
<tr>
<td>Mesa</td>
<td>Phoenix Biomedical Campus</td>
<td></td>
</tr>
<tr>
<td>Santa Cruz</td>
<td>Phoenix</td>
<td></td>
</tr>
<tr>
<td>Pima CC East</td>
<td></td>
<td>Chandler</td>
</tr>
<tr>
<td>UA Downtown</td>
<td></td>
<td>Paradise Valley</td>
</tr>
<tr>
<td>UA Science and Tec1 Park</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

II. PURPOSE AND NATURE OF PROGRAM – Please describe the purpose and nature of your program and explain the ways in which it is similar to and different from similar programs at two public peer institutions. Please use the attached comparison chart to assist you.

Purpose and Nature of Program:

The sports nutrition minor will allow qualified students to focus their education in the area of sports nutrition. Sports nutrition is a growing field and is a specialization within the scope of a nutrition practice. The fundamental nutritional science and background needed by students is similar to that of non-specialized nutrition majors. However, athletes have nutrition requirements, issues, and practices that differ from the general population. Students who complete a sports nutrition minor will have a better understanding of these differences and will be able to adapt basic nutrition concepts to meet the needs of athletes. This minor would be open to all interested main-campus undergraduate students,
however, it is expected that students majoring in Physiology or others who are pursuing a pre-health professional track will be most interested and prepared to complete this minor. In a survey of 393 students taking NSC 170C1, NSC 150C1, NSC 101, all of which include students from a broad range of majors (96% non-nutrition majors) across campus 54.2% indicated interest in a sports nutrition minor. Hundreds of comments were collected, including the following in support of the minor:

- “that sounds fascinating, especially as an athlete”
- “I love sports and I love nutrition, and it is a great way to combine the two.”
- “I am a dance major and I think the two would work really well together”
- “I have always been interested in things related to sports medicine/nutrition but I am already majoring in Psychology. Therefore, I think this is the perfect chance to minor in sports nutrition.”

Students who were not interested most often stated it was not related to their area of study including the following comments:

- “Want to pursue a career in law”
- “Never thought of taking a minor”
- “For me, it sounds very interesting, but as a psychology major and FSHD minor, it just has nothing to do with what I want to do. However, if I were going into a nutrition related field, this is definitely a minor I would be interested in.”

The proposed minor in sports nutrition is different from the existing minor in nutrition because it is highly specialized with a focus on athletes and athletic performance. In the existing minor, students may focus on a variety of aspects of food and nutrition-related health outcomes; they are offered many course options to fulfill the minor and it provides a much broader exposure but less in-depth in any one topic. The sports nutrition minor provides a very focused list of course offerings that provide an in-depth education in the area of nutrition specific to athletic performance. We do not believe that the Sports Nutrition will significantly impact enrollment in the existing nutrition minor for the following reasons: 1) The minors offer different objectives and learning outcomes to students. 2) The nutrition minor is most appropriate for greater undergraduate audience who is interested in general nutrition at a personal level 3) The existing nutrition minor is intended to be completed online over the summer and the sports nutrition minor will only be available to main campus students at this time. 4) Nutritional Sciences majors are not permitted to earn a sports nutrition minor.

Students will not be eligible to complete both the Sports Nutrition minor and the current Nutrition minor.

See (NSC)Comparison Chart Minor and Certificates.docx for comparison chart

III. PROGRAM REQUIREMENTS – The program requirements, including minimum number of credit hours, required courses, and any special requirements are included in the table below. Use the comparison chart to explain how your requirements are similar to and different from the two programs at the two public peer institutions to which you compared your program in Section I.

- The sports nutrition minor would require a minimum of 19 credit hours with 16 of those hours coming from upper division classes. There are five required courses (13 credit hours) and ten electives courses of which students must pick two (6 credit hours).

- Our requirements are similar to the University of Connecticut and the University of Central Missouri in that they all require a similar number of credit hours for completion. Ranging from 18 - 21 student credit hours. All three programs offer classes in nutrition including health promotion and classes in either physiology, kinesiology, or physical exercise.

- Our program differs in that we require 7 credit hours in sports nutrition classes and offer 6 additional sports nutrition units as electives. This makes us unique in that we are truly specialized and providing a strong curriculum for students who want to study and practice sports nutrition. In addition, our program offers more options for electives (8 courses) which allows students to customize their learning to meet their needs.

- NSC 101 will be set to allow Sports Nutrition minors to enroll.
<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Semester Offered</th>
<th>Prerequisites</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSC 101 Introduction to Human Nutrition</td>
<td>fall/spring</td>
<td>None</td>
<td>3</td>
</tr>
<tr>
<td>NSC 315 Sports Nutrition</td>
<td>Spring-NSC majors only summer-minors</td>
<td>NSC 101</td>
<td>3</td>
</tr>
<tr>
<td>NSC 320 Nutrition, Exercise, and Health Promotion</td>
<td>fall</td>
<td>NSC 101</td>
<td>3</td>
</tr>
<tr>
<td>NSC 415 Advanced Sports Nutrition</td>
<td>fall</td>
<td>NSC 315 per recent modifications</td>
<td>3</td>
</tr>
<tr>
<td>NSC 415L Advanced Sports Nutrition Lab</td>
<td>fall</td>
<td>NSC 315</td>
<td>1</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>2 Elective Required (additional elective options may be added before submission)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSC 311 Obesity Prevention</td>
</tr>
<tr>
<td>NSC 376 Bioactive Compounds and Food Additives</td>
</tr>
<tr>
<td>NSC 399 Sports Nutrition Independent Study</td>
</tr>
<tr>
<td>NSC 445 Assessment and Regulation of Human Body Composition</td>
</tr>
<tr>
<td>NSC 497A (currently NSC 393) Applied Sports Nutrition Workshop</td>
</tr>
<tr>
<td>ABE 270 Introduction to Biosensors and Mobile Health (currently under review)</td>
</tr>
<tr>
<td>MGMT 357 The Lifecycle of Elite Athletes / Life During and After Sports</td>
</tr>
<tr>
<td>PHCL 442 Human Performance Pharmacology</td>
</tr>
<tr>
<td>PSIO 420 Exercise and Environmental Physiology</td>
</tr>
<tr>
<td>TLS 356 Sports, Adolescents, and Schools</td>
</tr>
</tbody>
</table>

TOTAL: 19 units

*The number of courses listed as required is true unless the student takes NSC 170C1 as a T1 NATS and therefore has to take an extra elective to satisfy the deficit or if the student chooses electives with PSIO 201/202 pre-requisites, which will be a choice of their own.

**Only NSC 101, 315 and 376 are approved for the current Nutrition minor. Of these, NSC 376 is an elective in the sports Nutrition minor and not required. Students will have to choose either the Sports Nutrition minor or the current Nutrition minor.

A. CURRENT COURSES AND EXISTING PROGRAMS -- list current courses and existing university programs which will give strengths to the proposed program. If the courses listed belong to a department that is not a signed party to this implementation request, please obtain the department head’s permission to include the courses in the proposed program and information regarding accessibility to the course(s) for students in the proposed program.

- NSC 101 Introduction to Human Nutrition: 3 units
  Introduction to Human Nutrition covers the principles of human nutrition. Topics include digestion, absorption and metabolism of energy nutrients; vitamin structure and function; minerals in the body; eating disorders; nutrition and the life cycle; nutrition and disease; food safety; and the world food situation. The emphasis of the
course is the scientific approach to understanding human nutritional needs for proper growth, development and life.

- **NSC 315 Sports Nutrition: 3 units**
  NSC 315 will combine the applied science of nutrition with exercise physiology. Content in the course will span basic physiology as it applies to nutrition and sport, nutrient utilization, body composition, and specific application of nutrition and consulting for different sports in training and competition. Use of current literature will be used to understand research in sports nutrition. Once the foundation of physiology and nutrition is covered, the course will look at strategies for optimal performance in endurance, power, and team sports. Sports products and advertising will also be analyzed. The discussion board in D2L will be utilized extensively.

- **NSC 415R Advanced Sports Nutrition: 4 units**
  NSC 415R/515R provides students with advanced and practical knowledge in the field of sports nutrition. Students will learn techniques for evaluating athletes’ nutritional status including dietary intake methodologies and body composition testing. Tools for addressing athletes nutritional needs during training and competition will be practiced including designing nutrition periodization and carbohydrate loading schedules. In addition, this class takes an in depth look at the common ergogenic aids used by athletes to improve athletic performance and discusses the nutritional challenges faced by athletes such as proper recovery nutrition, injuries, and disordered eating.

- **NSC 415L Advanced Sports Nutrition Lab: 1 unit**
  NSC 415/515 Lef will use nutritional science and physiology to focus on sport specific menu and food needs for athletes. Content will include menu development and analysis of various menus, recipes and cookbooks designed for athletes. This will encompass designing specific food products and menus that are appropriate for specific sport activities that have special nutritional challenges during training and competition. This course will also include training on dietary and body composition assessment tools, allowing students to use that knowledge while assessing both body composition and food intake of an athlete. Graduate students will be required to complete an additional project described below.

- **NSC 311 Obesity Prevention**
  The goal of this course is to present a systems approach to obesity prevention, i.e., understanding the complex task of trying to change the way people eat, move, and live, and sustaining those changes over time.

- **NSC 320 Nutrition, Exercise, and Health Promotion: 3 units**
  This course is designed to build the knowledge and practical skills needed to motivate, communicate, and effect positive nutrition, physical activity, and health behavioral changes in the general population. Students will learn to create nutrition and physical fitness assessments, set realistic health goals, build rapport, and identify weight management challenges. Topics including nutrition and digestion, obesity physiology, and nutritional programming will be discussed and practiced within case studies. In addition, this course prepares students for the American Council on Exercise (ACE) Personal Training Certification Exam and the ACE Health Coach Certification Exam. Completion of these exams are optional and do not count toward the grade for this course.

- **NSC 376 Bioactive Compounds and Food Additives: 3 units**
  Bioactive food compounds (BAPC) are components in food that have biological activity in the body, yet have no disease associated with their absence. Food additives are usually meant to affect a food quality, but by proxy can also have biological effects on the body. These topics are covered in detail so that students are not limited to the basic 6 nutrients.

- **NSC 399 Sports Nutrition Independent Study: 3 units**
  The sports nutrition independent study is a collaboration between the Nutritional Sciences Department and RBar Energy, focusing on social media writing and marketing in the area of sports nutrition. Students will create a consistent flow of content based on sports and outdoor adventure experiences that will be marketed on social media via BLOC posts. Students will receive credit for all their work.

- **NSC 445 Assessment and Regulation of Human Body Composition: 3 units**
  This course explores the theoretical and applied aspects of body composition assessment methods. Students will learn about the limitations and usefulness of laboratory and field methods of assessing body composition in
healthy, clinical and athletic population subgroups. The considerations for application of body composition assessment in growth, development as well as aging will be addressed. Students will learn to perform basic anthropometric measures and compute reliability. Students will practice critically evaluating current research related to body composition assessment in a variety of subpopulations.

- NSC 497A Applied Sports Nutrition Workshop: 3 units (Course number change in process from NSC 392) The NSC Sports Nutrition Internship will provide students with the opportunity for hands-on experiential learning in the field of Sports Nutrition. SN Interns will learn to conduct dietary intake assessments; practice menu development for athlete training tables, recipe nutrient analysis, and observe University athlete training tables; create sports nutrition product taste tests, nutrition education materials and presentations for athletes; learn and practice body composition assessment and analysis techniques; and observe athletes during training to better understand the physical demands of various sports. The program coordinator and rotation leaders work closely with our internship participants to develop sports nutrition skill sets to complement career aspirations within the sports and fitness nutrition industry. This is an unpaid academic internship that lasts approximately 16 weeks, and takes place during University fall and spring semester schedules. This internship is a 1 credit undergraduate course and Interns will do 3 hours per week of course activities throughout the duration of their internship.

- ABE 270 Introduction to Biosensors and Mobile Health: 3 units
Several types of biosensors have become quite commercially successful in the past couple of decades, including glucose meters, pulse oximeters, and pregnancy tests. Recently, more advanced types of biosensors are being investigated and commercialized, to detect pathogens from food/water as well as animals/humans, to provide comprehensive blood test at home, etc. Major breakthroughs in achieving high sensitivity and specificity have been achieved with the use of lab-on-a-chip and nanotechnology. Towards easy-to-use, handheld, and daily monitoring of health conditions at home, use of Arduino, Raspberry Pi, 3D printing, smartphone, and other wearable devices are being investigated. Together with cloud computing, these efforts constitute towards a novel concept of mobile health or mHealth, which will revolutionize the future of health care.

- MGMT 357 The Lifecycle of Elite Athletes / Life During and After Sports: 3 units
This course is designed to teach students about management principles in sports organizations, help students learn about the life cycle of elite athletes, and help students navigate the life cycle in a successful manner.

NOTE: We are currently awaiting a letter of support

- PHCL 442 Human Performance
This course offers a thorough exploration of the pharmacology of purported performance enhancing drugs and supplements used by athletes and “weekend warriors”. Using the peer-reviewed medical literature, we will review the most discussed and relevant products as well as dismantle public misperception about the actual risks associated with these products. Then, we will delve into commonly sold supplements and review the science to answer questions such as: Do these drugs and supplements work, and if so, how? What are the risks? How does the media taint public perspectives about these drugs/supplements? These are only a sample of the explorations we will undertake in this course, and students will shape the direction of these queries and answers as well.

- PSIO 420 Exercise and Environmental Physiology: 3 units
Regulation and adjustment of physiological systems during acute exercise and adaptations with chronic exercise in various populations and environments; emphasizes physiological mechanisms.

- TIS 356 Sports, Adolescents, and Schools: 3 units
This course encourages students to think critically about sport in school settings. Using school sport as a social context, students explore group/individual identity formation, the promulgation of political ideologies & institutions, societal norms, and the development of ethical values.

**B. SPECIAL CONDITIONS FOR ADMISSION TO/DECLARATION OF THIS MAJOR**

- There are no special conditions for admission to declare the minor. A minimum GPA of 2.0 is required in the minor coursework.
C. NEW COURSES NEEDED -- list any new courses which must be added to initiate the program; include a course prefix, number, title, catalog description and number of units for each of these courses.

- There are no new courses needed

D. REQUIREMENTS FOR ACCREDITATION -- describe the requirements for accreditation if the program will seek to become accredited. Assess the eligibility of the proposed program for accreditation.

- Not applicable.

IV. STUDENT LEARNING OUTCOMES AND ASSESSMENT

A. STUDENT OUTCOMES -- At the conclusion of this program of study students should know, understand, and/or be able to

- Have a general understanding of metabolism and the nutrients involved in creating energy for sports performance.
- Understand the physical demands of different sports and how those demands create nutrition challenges for athletes.
- Identify nutrition issues that could affect physical performance.
- Create education materials for athletes on various sports nutrition related topics.
- Assess an athlete’s diet and recommend changes.
- Collect body composition data and make assessments.

B. STUDENT ASSESSMENT -- provide a plan for assessing intended student outcomes while the students are in the program and after they have completed the degree.

- Students will be assessed in core courses including:
- NSC 315 (a, b, c student outcomes)- Case studies, sports nutrition discussion posts and research assignments are requirements of the course and used as assessment tools to ensure that students are meeting the learning outcomes listed above.
- NSC 415R/L (d,e,f, student outcomes)-Case studies, presentation and education materials development, and graded in-class and lab activities are used to assess student learning outcomes.

V. STATE'S NEED FOR THE PROGRAM

A. HOW DOES THIS PROGRAM FULFILL THE NEEDS OF THE STATE OF ARIZONA AND THE REGION? -- INCLUDE AN EXPLANATION OF THE PROCESS OR SOURCE FOR ARRIVING AT ALL NUMBERS USED IN THIS SECTION

1. IS THERE SUFFICIENT STUDENT DEMAND FOR THE PROGRAM?

- Historically NSC 315 - Sports Nutrition has been offered online during the summer and students go out of their way to take the course because they are highly interested in the area of sports nutrition. Last summer 78 students completed the sports nutrition course with additional students left on the waiting list. The demand for the course has continued to grow and will now be being offered to 94 students in spring 2017.

| NSC 315 enrollment (summer only until 2016) |
|------|------|------|
| 2008 | 17   | FTF  |
| 2009 | 23   | FTF  |
| 2010 | 13   | FTF  |
| 2011 | 51   | ONL  |
| 2012 | 54   | ONL  |
| 2013 | 59   | ONL  |
| 2014 | 74   | ONL  |
| 2015 | 74   | ONL  |
| 2016-Spr | 72   | ONL  |
| 2016-Sum | 80   | ONL  |
Sports Nutrition is an online course and there has been an expressed interest from students to apply their skills while working with athletes. This interest lead to the creation of NSC 415R Advanced Sports Nutrition and NSC 415L Advanced Sports Nutrition lab, which had 8 students enrolled in the fall 2016 semester. We attribute the low number of students to the late approval of the course, within weeks of the start of class, and the course not being listed in the course catalog. In fall 2017 there will be 40 spots offered and we anticipate that all seats will be filled. Sports nutrition is a specialized area within the field of nutritional sciences and there is currently sufficient demand supported by the past and current enrollment in NSC 315. Students in NSC 315 are mixed and include Nutrition majors and minors, general studies students, and many others. Historically, only about 25% enrolled have been Nutrition majors. These students in NSC 315 have not been directly surveyed regarding their interest in a sports nutrition minor; however, interest in the course has been consistent and growing. Based on the information above and consultation with academic advisors in Nutritional Sciences, we believe that there is sufficient student demand for a minor in sports nutrition.

2. What is the anticipated student enrollment for this program? (Please utilize the following tabular format).

<table>
<thead>
<tr>
<th>5-YEAR PROJECTED ANNUAL ENROLLMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Minors</td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>50</td>
</tr>
</tbody>
</table>

- The 5-year projected annual enrollment is based on the number of Sports Nutrition minors that the department anticipates being able to accommodate in the core courses. Core and elective courses were considered in this projection, although we do not have a basis for estimating what the annual enrollment will be. Seats in NSC 101 and NSC 315 have been continuously increased to accommodate the demand and the general practice in the department is to continuously meet the demand for Nutritional Sciences courses on campus as needed. We re-evaluate seats and faculty capacity on an ongoing basis to meet the need of increasing class size. NSC has increased undergraduate faculty by 5 FTE within the last 15 months to accommodate anticipated growth.

3. What is the local, regional and national need for this program? Provide market analysis data or other tangible evidence of the need for and interest in this program. This might include results from surveys of current students, alumni, and/or employers or reference to student enrollments in similar programs in the state or region. Include an assessment of the employment opportunities for graduates of the program during the next three years.

- In a survey of Nutritional Sciences majors conducted in the spring 2016 semester, 41/131 (31.3%) of respondents ranked Sports Nutrition as the specialty topic they were most interested in taking additional classes in, if given the opportunity. An additional 30 students ranked it as their number 2 choice of specialty areas. Prospective students as well as current Nutritional Sciences minors also frequently inquire with academic advisors about opportunities to study sports nutrition. See survey results attached for complete survey questions and responses.

4. Beginning with the first year in which degrees will be awarded, what is the anticipated number of degrees that will be awarded each year for the first five years? (Please utilize the following tabular format).

<table>
<thead>
<tr>
<th>PROJECTED DEGREES AWARDED ANNUALLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Degrees</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>0</td>
</tr>
</tbody>
</table>

- This number was derived through the estimation that the trend in graduates will trail behind the estimated enrollment due to attrition and time to complete the minor requirements is expected to be 2-3 years.

IV. APPROPRIATENESS FOR THE UNIVERSITY -- Explain how the proposed program is consistent with the University mission and strategic direction statements of the university and why the university is the most appropriate location within the Arizona University System for the program. Please explain how this proposed program is consistent with the College strategic plan.

- The proposed Sports Nutrition minor aligns with CALS strategic plan to “Be a leading economic development engine for Arizona” (Goal #1), by “Focusing on regionally responsive and globally relevant education...”
(Strategy #1) and “Focusing CALS resources on degrees that allow students the best economic mobility.”
(Action Item #8). According to the U.S. Bureau of Labor and Statistics, the nutrition profession is growing faster
than average, with estimated job growth of 16% between 2014-2024. Further, the Fitness-related professions are
also estimated to grow 8% during the same time frame. Although the Sports Nutrition minor will not on its own
qualify students to be independent Nutrition Professionals, it is anticipated that the majority of recipients will be
those majoring in Physiology and other health-science related majors and will therefore have the qualifications
among graduating to pursue careers in health and wellness industries where their specialized education in Sports
Nutrition will be put to use. Having a minor in sport nutrition would help our students be more competitive when
applying for sport nutrition or health and wellness positions where experience or specialization is required and
when applying to graduate programs in related fields.

V. EXISTING PROGRAMS WITHIN THE ARIZONA UNIVERSITY SYSTEM
A. Arizona University System List all programs with the same CIP code definition at the same academic level
(Bachelor's, Master's, Doctoral) currently offered in the Arizona University System. (Please utilize the following
tabular format).

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>Degree type</th>
<th>Number of Students enrolled</th>
<th>LOCATION University &amp; Site</th>
<th>PROGRAM ACCREDITATION?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Kinesiology (new)</td>
<td>Minor</td>
<td>10 (100+ expected)</td>
<td>Arizona State University</td>
<td>no</td>
</tr>
<tr>
<td>2 Nutrition and Healthy Living</td>
<td>Minor</td>
<td>140</td>
<td>Arizona State University</td>
<td>no</td>
</tr>
</tbody>
</table>

Contact Pam Coonan (621-0950) coonan@email.arizona.edu for CIP Code information.

Curricular Affairs (and the Graduate College for graduate programs) will determine if you are required to complete a
comparison chart to discuss the ways in which the proposed program differs from University of Arizona programs.

VI. EXPECTED FACULTY AND RESOURCE REQUIREMENTS
A. FACULTY
1. Current Faculty – List the name, rank, highest degree, primary department and estimate of the level of
involvement of all current faculty members who will participate in the program.

Required Courses:
- Emily Hirschman, MPH, RD; Assistant Professor of Practice, Nutritional Sciences Department; NSC 101
  (10% involvement)
- Jennifer Riccettis, PhD, RD; Assistant Professor of Practice, Nutritional Sciences Department; NSC 191,
  NSC 315 (16% involvement)
- Veronica Mullins, MS, RD, CSCS; Assistant Professor of Practice, Nutritional Sciences Department; NSC 315,
  NSC 320, NSC 415R/C15R, NSC 415/515L, NSC 399, NSC 497A (50% involvement)
- Maria Plant, DCN, RD; Assistant Professor of Practice, Nutritional Sciences Department; NSC 101 (10%
  involvement)
- Kayle Skorupski, MS, RDN, CNSC, CSG RD; Assistant Professor of Practice, Nutritional Sciences
  Department; NSC 311, NSC 320 (16% involvement)
- Pat Sparks, PhD; Assistant Professor of Practice, Nutritional Sciences Department; NSC 415L (10%
  involvement)

Elective Courses:
- Amy Drescher, PhD; Nutritional Sciences Department, NSC 445 (6% involvement)
- Douglas Keen, PhD; Physiology, PSIO 420 (6% involvement)
- Veronica Mullins, MS, RD, CSCS; Assistant Professor of Practice, Nutritional Sciences Department; NSC 315,
  NSC 320, NSC 415R/C15R, NSC 415/515L, NSC 399, NSC 497A (50% involvement)
- Matthew Osermeyer; PhD, Department of Education TLS 356 (6% involvement),
- Jennifer Ravia, MS; Assistant Professor of Practice, Nutritional Sciences Department NSC 376 (6%
  involvement)
- Kayle Skorupski, MS, RDN, CNSC, CSG RD; Assistant Professor of Practice, Nutritional Sciences
  Department; NSC 311, NSC 320 (16% involvement)
• Jennifer G. Schnellmann, PhD: Department of Pharmacology; College of Medicine (6% involvement)
• Eller College, MGMT 357 (6% involvement) NOTE: Awaiting syllabus
• Jeong-Yeol Yoon, PhD; ABE 270, Agriculture and Biosystems Engineering, CALS (6% involvement)

NOTE: Instructor involvement was estimated based on the average of the percent of required courses taught and percent of elective classes taught.

2. Additional Faculty -- Describe the additional faculty needed during the next three years for the initiation of the program and list the anticipated schedule for addition of these faculty members.
   • None

3. Current Student and Faculty FTEs -- Give the present numbers of Student FTE (identify number by graduate and undergraduate students) and Faculty FTE in the department or unit in which the program will be offered.
   • NSC has 10 FTE faculty for the undergraduate program; there are 615 majors and 147 Nutrition minors. This is a ratio of 1 faculty member to 76 students.

4. Projected Student and Faculty FTEs -- Give the proposed numbers of Student FTE and Faculty FTE for the next three years in the department or unit in which the program will be offered.
   • NSC projects to have a net increase of 60 students added to the program after 3 years, with the remaining 40 students already accounted for in the Nutrition major program. This would yield a ratio of 1 faculty member to 82 students.

B. LIBRARY

1. Acquisitions Needed -- Describe additional library acquisitions needed during the next three years for the successful initiation of the program.
   • No new library acquisitions will be needed for the implementation of this program.

C. PHYSICAL FACILITIES AND EQUIPMENT

1. Existing Physical Facilities -- Assess the adequacy of the existing physical facilities and equipment available to the proposed program. Include special classrooms, laboratories, physical equipment, computer facilities, etc.

Many of the courses offered in the proposed Sports Nutrition minor program are offered online and of those that are offered face-to-face, standard classroom accommodations are sufficient. Unique facilities available to Sports Nutrition minors include:

• Food Science Lab- Located in the Shantz Building, students in the NSC 415 lab currently utilize this space for recipe development activities.
• Student Nutrition Advising Center (SNAC)- Also located in the Shantz building, this space lends itself to hosting special guest speakers and planning meetings for student engagement activities.

2. Additional Facilities Required or Anticipated -- Describe physical facilities and equipment that will be required or are anticipated during the next three years for the proposed program.
   • At this time, no additional facilities are required or anticipated to be necessary for the delivery of this program.

D. OTHER SUPPORT

1. Other Support Currently Available -- Include support staff, university and non-university assistance.
   • Michelle Mendoza- Academic Advisor in Nutritional Sciences- Will assist students with declaring the minor, course planning, and other advising needs. Will also aid in the communication with students regarding program updates and student opportunities.
• Nita Ocaseney- Academic Advisor in Nutritional Sciences- Will assist students with declaring the minor, course planning, and other advising needs. Will also aid in the communication with students regarding program updates and student opportunities.

2. Other Support Needed, Next Three Years -- List additional staff needed and other assistance needed for the next three years.
• No additional support is expected to be necessary in the next three years for the successful delivery of this program. Current faculty in the department are qualified and able to accommodate growth in the proposed sports nutrition minor. Additional sections of classes, such as NSC 415L, will be offered as enrollment in the minor demands. If the minor were to grow and therefore require additional faculty to meet the demand, the department will explore increasing faculty FTE as needed.

VII. FINANCING

A. SUPPORTING FUNDS FROM OUTSIDE SOURCES --List.

B. BUDGET PROJECTIONS FORM -- Complete the budget projections form describing the current departmental budget and estimating additional costs for the first three years of operation for the proposed program. Please note that these costs for each year are incremental costs, not cumulative costs. Include in this budget the anticipated costs for support for instruction, administration of the program, graduate students, marketing, the support discussed in Section VI-D.2, and any other costs that will be needed.

VIII. OTHER RELEVANT INFORMATION

IX. REQUIRED SIGNATURES:

Managing Unit Administrator: ___________________________ 
(name and title)

Managing Administrator’s Signature: _____________________ Date: 08/21/17

Managing Unit Administrator: ___________________________ 
(name and title)

Managing Administrator’s Signature: _____________________ Date:

Managing Unit Administrator: ___________________________ 
(name and title)

Managing Administrator’s Signature: _____________________ Date:

Dean’s Signature: ___________________________ Date: 08/21/17

Dean’s Signature: ___________________________ Date:

All programs that will be offered through distance learning must include the following signature. The signature of approval does not indicate a commitment to invest in this program. Any potential investment agreement is a separate process.

Joel Hauff, Associate Vice President of Student Affairs & Enrollment Management/Academic Initiatives and Student Success

Signature: ___________________________ Date:

All programs that will be offered fully online must include the following signature: The signature of approval does not indicate a commitment to invest in this program. Any potential investment agreement is a separate process.
Vincent Del Casino Jr., Vice Provost for Digital Learning and Associate Vice President of Student Affairs & Enrollment Management

Signature: ___________________________ Date: ________________________

Note: In some situations signatures of more than one unit head and/or college dean may be required.
<table>
<thead>
<tr>
<th>Program Name</th>
<th>University of Arizona</th>
<th>University of Connecticut</th>
<th>University of Central Missouri</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Currently enrolled students</strong></td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Focus</strong></td>
<td>Nutritional Sciences</td>
<td>Nutritional Sciences and Kinesiology</td>
<td>Nutritional Sciences</td>
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<tr>
<td><strong>Sample Course</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Target Careers</strong></td>
<td>Sports RD, team nutritionist, private practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Units Required</strong></td>
<td>19 minimum</td>
<td>18 minimum</td>
<td>20-21 minimum</td>
</tr>
<tr>
<td><strong>Upper -division Units Required</strong></td>
<td>10</td>
<td>12</td>
<td>18</td>
</tr>
<tr>
<td><strong>Required Core Courses (Include Prefix, title, Unit Count)</strong></td>
<td>NSC 101 Introduction to Nutrition 3 units</td>
<td>NUSC 4236 Metabolism and function of nutrients 3 units</td>
<td>D&amp;N 3340 nutrition 3 units</td>
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<tr>
<td></td>
<td>NSC 315 Sports Nutrition 3 units</td>
<td>NUSC 4250 Nutrition for Exercise and Sports -3 units</td>
<td>D&amp;N 4340 advanced nutrition 3 units</td>
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<tr>
<td></td>
<td>NSC 320 nutrition, exercise, and health promotion 3 units</td>
<td>KINS 4500 physiology systems in human performance - 3 units</td>
<td>D&amp;N 4346 Dietary Supplements 3 units</td>
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<tr>
<td></td>
<td>NSC 415R Advanced Sports Nutrition 3 units</td>
<td>KINS 4510 mechanisms and adaptations in sport and exercise 3 units</td>
<td>HED 4300 Nutrition and human performance 3</td>
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<tr>
<td></td>
<td>NSC 415L Advanced Sports Nutrition lab 1 unit</td>
<td>PE 2850 Exercise physiology 3 units</td>
<td>PE 4850 Assessment &amp; evaluation of fitness/wellness 3 units</td>
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<tr>
<td><strong>Number of Elective Units Required</strong></td>
<td>6 units</td>
<td>6 units</td>
<td>2-3 units</td>
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<tr>
<td><strong>Electives (Include Prefix, title, Unit Count)</strong></td>
<td>NSC 311 Obesity Prevention 3 units</td>
<td>NUSC 2241 nutritional assessment 3 units</td>
<td>PE 4860 Fitness program and implementation 3 units</td>
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<td>NSC 376 bioactive food components 3 units</td>
<td>NUSC 4299 Independent study 3 units</td>
<td>D&amp;N 4344 Nutrition education and counseling 2 units</td>
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<td>NSC 399 sports nutrition independent study 3 units</td>
<td>KINS 3099 independent study 3 units</td>
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<td></td>
<td>NSC 445 assessment and regulation of human body composition 3 units</td>
<td>KINS 3530 physiological assessment of competitive athletes 3 units</td>
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<td></td>
<td>NSC 497A sports nutrition internship 3 units</td>
<td>AH 3231 program planning for health promotion 3 units</td>
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<td></td>
<td>ABE 270 Biosensors and Mobile Health (currently under review) 3 units</td>
<td>AH 3234 fitness and health 3 units</td>
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<td></td>
<td>MGMT 357 The Lifecycle of Elite Athletes / Life During and After Sports 3 units</td>
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<td></td>
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<tr>
<td></td>
<td>PHCL 442 Human Performance Pharmacology 3 units</td>
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<tr>
<td></td>
<td>PSIO 420 Exercise and Environmental physiology 3 units</td>
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<td></td>
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<tr>
<td></td>
<td>TLS 356 Sports, Adolescents, and Schools 3 units</td>
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## METRICS

<table>
<thead>
<tr>
<th>Metric</th>
<th>1st Year 2017-2018</th>
<th>2nd Year 2018-2019</th>
<th>3rd Year 2019-2020</th>
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</thead>
<tbody>
<tr>
<td>Net increase in annual college enrollment UG</td>
<td>50</td>
<td>75</td>
<td>100</td>
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<tr>
<td>Net increase in college SCH UG</td>
<td>450</td>
<td>675</td>
<td>900</td>
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<tr>
<td>Net increase in annual college enrollment Grad</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Net increase in college SCH Grad</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Number of enrollments being charged a Program Fee</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>New Sponsored Activity (MTDC)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Number of Faculty FTE</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

## FUNDING SOURCES

### Continuing Sources
- UG RCM Revenue (net of cost allocation) $270,000, $405,000, $540,000
- Grad RCM Revenue (net of cost allocation)
- Program Fee RCM Revenue (net of cost allocation)
- F and A Revenues (net of cost allocations)
- UA Online Revenues
- Distance Learning Revenues
- Reallocation from existing College funds (attach description)
- Other Items (attach description)

Total Continuing $270,000, $405,000, $540,000

### One-time Sources
- College fund balances
- Institutional Strategic Investment
- Gift Funding
- Other Items (attach description)

Total One-time - $ - $ - $

### TOTAL SOURCES
Total Sources $270,000, $405,000, $540,000

## EXPENDITURE ITEMS

### Continuing Expenditures
- Faculty $50,000, $50,000, $50,000
- Other Personnel
- Employee Related Expense $17,450, $17,450, $17,450
- Graduate Assistantships
- Other Graduate Aid
- Operations (materials, supplies, phones, etc.)
- Additional Space Cost
- Other Items (attach description)

Total Continuing $67,450, $67,450, $67,450

### One-time Expenditures
- Construction or Renovation
- Start-up Equipment
- Replace Equipment
- Library Resources
- Other Items (attach description)

Total One-time - $ - $ - $

### TOTAL EXPENDITURES
Total Expenditures $67,450, $67,450, $67,450

what say ye?

---------- Forwarded message ----------
From: Farrell-Poe, Kathryn L - (kittfp) <kittfp@email.arizona.edu>
Date: Thu, Feb 9, 2017 at 2:31 PM
Subject: RE: a request to use one of your courses in a minor program
To: Scott Going <scottbgoing@gmail.com>

Hi Scott,

I’m excited to hear this. The course was just recently added. It will be a summer session 2 class only taught face-to-face. Since most engineers can’t take natural sciences general electives, we’d welcome your students!

Just want to make sure that the class is what you were expecting.

Kitt

---

Scott Going, PhD
Professor and Department Head
February 17, 2017

Scott Going, Department Head
Nutritional Sciences

Dear Scott:

As we discussed, I am approving the use of MGMT 357, Lifecycle of Elite Athletes, as a potential elective for the CALS minor in Sports Nutrition. Please note that MGMT 357 requires two pre-requisites: ECON 200 and ACCT 200 or 250. Regardless of major, a student must take these two courses before enrolling in MGMT 357.

Sincerely,

[Signature]

Jerel Slaughter, Department Head
Management and Organizations
February 8th, 2017

Scott Going, PhD
Professor and Head
Department of Nutritional Sciences

February 10, 2017

Dear Dr. Going,

Thank you for your inquiry regarding PHCL 442, *Human Performance Pharmacology*, a new course offered by the Department of Pharmacology in the College of Medicine. We are pleased to have this course included as an elective option for students minoring in Sports Nutrition within the Department of Nutritional Sciences.

PHCL 442 is a three-credit course is to be added to the Schedule of Classes for the Fall 2017 term. The class will be offered online as well as have an option for in-class attendance at a meeting time and location to be determined soon.

This course is taught by Jennifer G. Schnellmann, PhD, an Associate Professor in our Department. She can be reached at schnellj@email.arizona.edu or 626-4940. She is delighted hear any inquiries or comments you may have to clarify course content or make suggestions that would make the course more meaningful for your students.

Best wishes,

Todd W. Vanderah, Ph.D.
Professor & Head Department of Pharmacology,
Joint Appointment in Anesthesiology and Neurology
COM, University of Arizona
Email: vanderah@email.arizona.edu
Office phone: (520) 626-7801
Dear Scott,

I am writing this email in support of the Sports Nutrition Minor. The Department of Physiology supports the enrollment of Sports Nutrition Minors in PSIO 420, Exercise and Environmental Physiology, as space allows. In fact, we think that this minor will be quite popular and that our own majors will be interested. Please use this email communication in place of a support letter from our department.

Best wishes,

Claudia

Claudia Stanescu, Ph.D.
Assistant Professor
Director, Physiology Undergraduate Program
University of Arizona, Department of Physiology
Sitting Room 108
1713 E. University Blvd.
Tucson, AZ 85721
(520) 621-2795
February 10, 2017

Scott Going, PhD
Professor and Department Head
Department of Nutritional Sciences
College of Agriculture & Life Sciences
The University of Arizona
1177 E. 4th Street
Shantz Building 315
Tucson, AZ 85721-0038

Dear Dr. Going,

We are pleased that the Department of Nutritional Sciences has requested that we approve our course TLS 356 *Sports, Adolescents and School* as an elective option for the proposed Sports Nutrition minor. We will be happy to support the enrollment of Sports Nutrition students in TLS 356 as space allows.

Sincerely,

Bruce Johnson
Professor and Head, Department of Teaching, Learning & Sociocultural Studies
University of Arizona

Cc: Matt Ostermeyer, Mark Jenks, Crystal Soltero