Agenda Item #15-48
Effective Summer 2016

Eastern Illinois University
Revised Course Proposal
FCS 4755, Nutrition for Physical Performance

Banner/Catalog Information (Coversheet)

1. **____New Course or __x___Revision of Existing Course**

2. **Course prefix and number:** _____FCS 4755_____

3. **Short title:** __Nutrition/Physical Performance_____

4. **Long title:** _Nutrition for Physical Performance_____

5. **Hours per week:** _3__ Class _0__ Lab _3__ Credit

6. **Terms:** ___ Fall ___ Spring ___ Summer _x__ On demand

7. **Initial term**: ___ Fall ___ Spring _x__ Summer Year: _2016___

Catalog course description: Examination of metabolism and energy systems related to physical performance. Plan optimal diets for performance. Examination and evaluation of controversial practices that may influence metabolism and performance.

8. **Course attributes:**

   General education component: ____none_____

   ___ Cultural diversity ___ Honors ___ Writing centered ___ Writing intensive ___Writing active

9. **Instructional delivery**
   Type of Course:

   _x__ Lecture ___ Lab ___ Lecture/lab combined ___ Independent study/research

   ___ Internship ___ Performance ___ Practicum/clinical ___ Other, specify: _____

   Mode(s) of Delivery:

   ___ Face to Face _x__ Online ___ Study Abroad

   ___ Hybrid, specify approximate amount of on-line and face-to-face instruction_____

10. **Course(s) to be deleted from the catalog once this course is approved**. _None_____

11. **Equivalent course(s):** ____none_____

    a. **Are students allowed to take equivalent course(s) for credit?** ___ Yes _x__ No

12. **Prerequisite(s): __** FCS 2100 and BIO 2001G or BIO 2210 and BIO 2220_____

a. **Can prerequisite be taken concurrently?** ___ Yes _x__ No

b. **Minimum grade required for the prerequisite course(s)? _D__**

c. **Use Banner coding to enforce prerequisite course(s)?** _x__ Yes ___ No

d. **Who may waive prerequisite(s)?**

___ No one ___ Chair _x__ Instructor ___ Advisor ___ Other (specify)

13. **Co-requisite(s):** __none_____

14. **Enrollment restrictions**

a. **Degrees, colleges, majors, levels, classes which <u>may</u> take the course:** <u>Anyone who meets the prerequisites.</u>_____

b. **Degrees, colleges, majors, levels, classes which may <u>not</u> take the course:** <u>Those who don't meet the prerequisites and student class standing.</u>

15. **Repeat status:** _x__ May not be repeated ___ May be repeated once with credit

16. **Enter the limit, if any, on hours which may be applied to a major or minor:** _3__

17. **Grading methods:** _x__ Standard ___ CR/NC __ Audit ___ ABC/NC

18. **Special grading provisions:**

___ Grade for course will <u>not</u> count in a student's grade point average.

___ Grade for course will <u>not</u> count in hours toward graduation.

___ Grade for course will be removed from GPA if student already has credit for or is registered in: _____

___ Credit hours for course will be removed from student's hours toward graduation if student already has credit for or is registered in: _____

19. **Additional costs to students:**
Supplemental Materials or Software _____none_____

Course Fee _x__No ___Yes, Explain if yes_____

20. **Community college transfer:**

___ A community college course may be judged equivalent.

_x__ A community college may <u>not</u> be judged equivalent.

Note: Upper division credit (3000+) will <u>not</u> be granted for a community college course, even if the content is judged to be equivalent.

Rationale, Justifications, and Assurances (Part I)

1. ___Course is required for the major(s) of __BS in Kinesiology & Sports Studies: Exercise Science Concentration

   ___Course is required for the minor(s) of _____

   ___Course is required for the certificate program(s) of _____

   _x__ Course is used as an elective for all who wish to enroll in the course and who meet the course prerequisites.

2. **Rationale for proposal**: This course was originally designed in 1995 to be taken by those students enrolled in the BS in Family and Consumer Sciences (mainly students in the dietetics option), athletic training, physical education, and exercise physiology degree programs. While the course is still a viable elective for these students, graduate students in the MS in Nutrition and Dietetics and MS in Health Promotion and Leadership programs could take this course as an elective as well. This revised course has been updated in content as well as its availability online since its initial course offering.

3. **Justifications for (answer N/A if not applicable)**

   Similarity to other courses: The content of this course is discussed briefly in several undergraduate nutrition and health courses. However, the depth of information and the focus on athletes with and without special needs (e.g. pregnancy, diabetes) as presented in this course is not similar to existing courses.

   Prerequisites: Personal Nutrition (FCS 2100) and Human Physiology (BIO 2001G). The successful completion of introductory nutrition and physiology courses are necessary as the information presented in this course builds on a foundational knowledge of nutrition and physiology. As Exercise Science students do not take BIO 2001G, but BIO 2210 and BIO 2220 are now required.

   Co-requisites: N/A

   Enrollment restrictions: N/A

   Writing active, intensive, centered: N/A

4. **General education assurances (answer N/A if not applicable)**

   General education component: N/A

   Curriculum: N/A

   Instruction: N/A

   Assessment: N/A

5. **Online/Hybrid delivery justification & assurances (answer N/A if not applicable)**

   Online or hybrid delivery justification: Online delivery of this course is justified by the following: 1. potential increase in enrollment in this course and is supported by our School's recruitment initiatives; 2. credible electronic materials are readily available to the students at no cost which lends

the course to being successful online; and 3. the online delivery increases the flexibility and accessibility of this course to our students, both traditional and non-traditional student.

Instruction: Students will be assigned a discussion question or reflection each week concerning the material covered. They will also be required to post a response to at least one other student's response. A discussion rubric will be used to evaluate the content of the discussion. Each of the twelve modules will require students to read the assigned materials, view presentations (powerpoints with audio and/or videos), complete related discussions, assignments, and exams. Instructors teaching online offerings will be trained/qualified as per university guidelines (e.g., OCDI).

Integrity: The instructor will correspond with each student on a regular basis. Each posting on the discussion board will reflect the student's name and will be monitored carefully. The discussions will be structured in a manner that will allow for the integration of the materials on a deeper level. Turnitin plagiarism software will be used to help ensure original and authentic written work. The examination will be timed and available for a limited time span with Respondus Lockdown browser enabled; however, notes and other resources can be utilized.

Interaction: Each student will be interacting directly with each other via D2L. Discussion boards, email, chat rooms and assignment boxes will be used for direct communication. Students will also have the opportunity to correspond through telephone or in person on campus, if they so desire.

Model Syllabus (Part II)

Please include the following information:

1. Course number and title: FCS 4755 Nutrition for Physical Performance

2. Catalog description: Examination of metabolism and energy systems related to physical performance. Plan optimal diets for performance. Examination and evaluation of controversial practices that may influence metabolism and performance.

3. Learning objectives:

Upon successful completion of this course, students will be able

a. Critically evaluate literature on nutrition and physical performance (CT-3, CT-4, CT-5, CT-6, CT-7, WR-3, WR-8, WR-11, QR-3, QR-4, QR-5, QR-6, QR-7) (GLG a-d)
b. Discuss physiology of normal digestion and absorption of nutrients (CT-2, CT-3, CT-4, CT-5, CT-7, CT-8, WR-3, WR-8) (GLG a, b, c)
c. Analyze nutritional requirements of healthy individuals in the life cycle and in sports exercise (CT-8, CT-9, CT-10, CT-11, CT-12, WR-8, WR-11, QR-8, QR-9, QR-10, SL-12) (GLG a-d)
d. Explain the mechanism of water, electrolytes, and temperature regulation at rest and during physical activity (CT-6, CT-8, WR-8, QR-8) (GLG a, c)
e. Identify dietary recommendations for different types of activities (CT-6, CT-8, CT-9, CT-10, CT-12, WR-8, QR-8, QR-9, QR-10, QR-12, SL-12) (GLG a, b, c)
f. Apply scientific principles in evaluation of ergogenic aids (CT-11, WR-11, QR-11) (GLG a-d)
g. Evaluate techniques of body composition analysis (CT-8, CT-9, CT-10, WR-8, QR-8, QR-9, QR-10) (GLG a, c)
h. Explain the role of regular physical activity in physical performance throughout the life

cycle (CT-8, CT-12, WR-8, QR-8, QR-12)(GLG a-d)

Upon completion of the course, graduate students will, in addition to the above course objectives,

a. Evaluate and explain a condition/chronic disease and the impact it has on an athlete's performance (GLG a-d)
b. Explain the dietary needs for this particular athlete (GLG a, b, c)
c. Discuss the impact ergogenic aids will have on the athlete and their condition/chronic disease (GLG a-d)

4. Course materials:

Fink, H., & Mikesky, A. (2013). *Practical Applications in Sports Nutrition, 4th Ed.* Jones and Bartlett Publishers, Sudbury, Massachusetts.

These articles will be placed in D2L for the students:
Aerenhouts, D., Deriemaeker, P., Hebbelinck, M., & Clarys, P. (2011) Energy and macronutrient intake in adolescent sprint athletes: A follow-up study. *Journal of Sports Sciences, 29*(1), 73-82.

Andelkovic, M., Baralic, I., Dordevic, B., Stevujevic, J.K., Radivojevic, N., Dikic, N., Skodric, S.R., & Stojkovic, M. (2014) Hematological and biochemical parameters in elite soccer players during a competitive half season. *Journal of Medical Biochemistry, 33*, 1-7.

Schagatay, E., & Lodin-Sundström, A. (2014) Fasting improves static apnea performance in elite divers without enhanced risk of syncope. *European Journal of Sport Science, 14(sup1),* S157-S164.

5. Weekly outline of content. The course will be divided into 12 modules of learning spanning the entire 15 week semester:

Module	**Topic**	**Contact Hours**
1	Introduction to Nutrition for Physical Performance	2.5
2	Digestion and Absorption of Nutrients	5
3	The Role of Carbohydrates during Activity	2.5
4	The Role of Fats and Minerals during Activity	2.5
5	The Role of Proteins during Activity	2.5
6	Fluid and Electrolyte Requirements during Activity	2.5
7	The Role of Vitamins and Minerals during Activity	2.5
8	Assessment of Nutritional Status and Physical Activity of Athletes	2.5
9	Weight Management of the Athlete	2.5
10	Eating Disorders among Athletes	2.5
11	Ergogenic Aids	2.5
12	Special Considerations for Athletes	5
	Exams	2.5
	Total Hours	37.5
	Final Exam	2.5

6. Assignments and evaluation, including weights for final course grade.

Article Reviews 54 points

Carbohydrate Loading Project	50 points
Ergogenic Aid Fact Sheet	48 points
Discussions/Reflections	168 points
Examinations	180 points
Total points (undergraduate)	500 points
Major Project (graduate)	100 points
Total Graduate Points	600 points

Graduate students will be provided with a case study of an athlete with a condition (e.g. eating disorder, type I/II diabetes, CVD, etc). Graduate students will need to address the disease/condition, the dietary needs for this particular athlete, and concerns related to his/her intent to use ergogenic aids (both legal and illegal).

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

7. Correlation of learning objectives to assignments and evaluation.

Course Objective	Article Review	Carbohydrate Loading Project	Discussions/ Reflections	Ergogenic Aid Fact Sheet	Exams	Major Project
Critically evaluate literature on nutrition and physical performance	X		X	X		X
Discuss physiology of normal digestion and absorption of nutrients		X	X		X	
Analyze nutritional requirements of healthy individuals in the life cycle and in sports exercise	X	X	X		X	X
Explain the mechanism of water, electrolytes, and temperature regulation at rest and during physical activity	X		X		X	
Identify dietary recommendations for different types of activities		X	X		X	X
Apply scientific principles in evaluation of ergogenic aids			X	X	X	X
Evaluate techniques of body composition analysis			X		X	
Explain the role of regular physical activity in physical performance throughout the life cycle			X		X	X
Evaluate and explain a condition/chronic disease and the impact it has on an athlete's performance						X
Explain the dietary needs for this particular athlete						X
Discuss the impact ergogenic aids will have on the athlete and their condition/chronic disease						X

Date approved by the SFCS Curriculum Committee: October 15, 2015
Date approved by the LCBAS Curriculum Committee: November 10, 2015

Date approved by CAA:
Date approved by CGS: