OK - 100% online
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Undergraduate Distance Education Review Form

(Required for all courses taught by distance education for more than one-third of teaching contact hours.)

Received
FEB 26 2008
Liberal Studies

Existing and Special Topics Course

Course: FDNT 245 Sports Nutrition

Instructor(s) of Record: Rita M. Johnson, PhD, RD, LDN

Phone: 7-3281 **Email:** Rita.Johnson@iup.edu

Step One: Proposer

A. Provide a brief narrative rationale for each of the items, A1- A5.

1. How is/are the instructor(s) qualified in the distance education delivery method as well as the discipline?

The instructor for this course, Rita M. Johnson, is the originator of this course and has been its only instructor (except once) since the course was approved. It was first approved as a 1 credit course, but has been a 3 credit course for many years. Rita has coordinated the Sports Nutrition Services that is co-sponsored by the Athletic Department, since 1996 and supervises a graduate assistant that provides services to IUP athletes that are members of NCAA-recognized teams.

Rita has taken several Web CT workshops and has been using the gradebook and quiz aspect of Web CT for one year. She will spend a great deal of the summer at the Instructional Technology offices developing the remainder of this course.

2. How will each objective in the course be met using distance education technologies?

Nine course objectives are identified on the syllabus of record. They are listed below, along with an explanation of how the distance education format will be used to accomplish them.

1. identify concepts of normal nutrition that relate to the needs of exercising individuals.

   Almost all sports nutrition principles apply concepts of normal nutrition to exercise. Modules 1 – 9 will review the concepts of normal nutrition and then apply them to the exercising individual. While food choices will be incorporated throughout, Module 10 will specifically focus on meal planning.

2. evaluate current research about carbohydrate, lipid, and protein to the actual needs of all types and levels of athletes.

   Modules 4 – 6 will incorporate the recommendations for the macronutrients for athletes to dietary changes that may enhance performance. The assignments for Module 4 and 5 apply this information. Modules 12 and 13 focus on children and athletes that are in a category called "special athletes". These include athletes that include: athletes that use wheelchairs, high atltitude athletes, and others.

3. recommend realistic food choices for all levels of exercising children, adolescents, and adults using current research.

Nutrient recommendations are translated into food choices throughout the modules. Modules 10, 12, and 13 specifically, focus on food choices throughout the lifecycle.

4. discuss fluid needs of and compare fluid choices for exercising people.

   Module 7 emphasizes this objective. It will also be emphasized in Modules 12 and 13. Fluid replacement and hydration is of utmost importance in sports nutrition.

5. evaluate research about vitamin and mineral supplementation on athletic performance.

   Modules 8 and 9 emphasize this objective.

6. Discuss special topics of interest to competitive athletes (e.g. carbohydrate loading, iron nutrition, amenorrhea/osteoporosis, eating disorders).

   Carbohydrate loading will be discussed in Module 4. Iron nutrition will be discussed in Module 9. Amenorrhea and its risk to osteoporosis will be included in Module 11 with a discussion of eating disorders.

7. identify dietary behaviors which enhance performance for all types and levels of athletes.

   Dietary behaviors and food choices that are related to performance will be emphasized throughout the course.

8. evaluate selected ergogenic aids utilizing claims in the popular press combined with research findings.

   Students will begin to understand how to evaluate ergogenic aids in Module 1. Other ergogenic aids will be discussed as they fit into the modules. For example, creatine supplementation will be discussed with Module 5.

9. provide a written critique of sports nutrition information in "popular press" magazines and/or sports nutrition misbeliefs and present a summary to their peers.

   Students will accomplish this objective with the review that will be posted for all students to read. It is stated on the syllabus as being worth 100 points.

3. How will instructor-student and student-student, if applicable, interaction take place?

   Students will post their assignments to their private posting page for grading by the instructor. It is likely that small group discussions will be incorporated into assignments later in the semester. The student's review of an ergogenic aid will be posted so that all class members can read it. The instructor will have on-line office hours that will be stated on the syllabus.

4. How will student achievement be evaluated?

   This course is divided into 13 modules with ten quizzes that will be administered through

Web CT. They will be available during a limited basis regarding dates/time to complete. Students will receive immediate feedback on quiz scores. In addition to quizzes, students will be assigned seven assignments, along with one longer review of an ergogenic aid.

5. How will academic honesty for tests and assignments be addressed?

   Students will be expected to adhere to the University Academic Integrity Policy and the "honor code" statement appears at the beginning of every quiz. A random test bank and timed quizzes will be used; quizzes will be designed so that they cannot be printed. Students will not be able to see their quiz questions until after the time limit for that particular quiz.

   Most student assignments will be posted to their private posting area. They will be graded by the instructor, based upon the student following the directions given for the assignment.

B. Submit to the department or its curriculum committee the responses to items A1-A5, the current official syllabus of record, along with the instructor developed online version of the syllabus, and the sample lesson. This lesson should clearly demonstrate how the distance education instructional format adequately assists students to meet a course objective(s) using online or distance technology. It should relate to one concrete topic area indicated on the syllabus.

   Included with this proposal are:
   1. An online syllabus
   2. The current syllabus of record
   3. Directions for the University-wide Curriculum Committee to view these and a sample on-line lesson that is under development.

Step Two: Departmental/Dean Approval

Recommendation: ☑ Positive (The objectives of this course can be met via distance education)

☐ Negative

Susan Dahlheimer 2/25/08
Signature of Department Designee Date

Endorsed: Carleen C. Zoni 2-25-08
Signature of College Dean Date

Forward form and supporting materials to Liberal Studies Office for consideration by the University-wide Undergraduate Curriculum Committee. Dual-level courses also require review by the University-wide Graduate Committee for graduate-level section.

Step Three: University-wide Undergraduate Curriculum Committee Approval

Recommendation: ☐ Positive (The objectives of this course can be met via distance education)

☐ Negative

Gail S Sechrist 4/1/08

Signature of Committee Co-Chair Date

Forward form and supporting materials to the Provost within 30 calendar days after received by committee.

Step Four: Provost Approval

☒ Approved as distance education course ☐ Rejected as distance education course

[signature] (for) 4/8/08

Signature of Provost Date

Forward form and supporting materials to Associate Provost.

I. Catalag Description

FN 245 Sports Nutrition

3 credits
3 lecture hours
0 lab hours
(3c-0l-3sh)

Prerequisites: FN 145 or FN 212

Emphasizes knowledge and application of sports nutrition principles. The impact of the macro- and micro-nutrients on physical performance will be discussed in light of current scientific research and applied to realistic dietary recommendations for all types and levels of athletes.

II. Course Objectives

Upon completion of this course students will:

1. identify concepts of normal nutrition that relate to the needs of exercising individuals.

2. evaluate current research about carbohydrate, lipid, and protein to the actual needs of all types and levels of athletes.

3. recommend realistic food choices for all levels of exercising children, adolescents, and adults using current research.

4. discuss fluid needs of and compare fluid choices for exercising people.

5. evaluate research about vitamin and mineral supplementation on athletic performance.

6. discuss special topics of interest to competitive athletes (e.g. carbohydrate loading, iron nutriture, amenorrhea/osteoporosis, eating disorders).

7. identify dietary behaviors which enhance performance for all types and levels of athletes.

8. evaluate selected ergogenic aids utilizing claims in the popular press combined with research findings.

9. provide a written critique of sports nutrition information in "popular press" magazines and/or sports nutrition misbeliefs and present an oral summary to their peers.

III. Course Outline

Note: 1 lecture = 1 hour

A. Introduction/What is Sports Nutrition?/What is a Sports Nutritionist? (2 lectures)

1. Sports nutrition as a special interest
2. Recommended educational preparation for sports nutritionists
3. References (re: books, journals) for sports nutritionists
4. Professional organizations for sports nutritionists

B. The Energetics of Exercise: Fuel Utilization of Carbohydrate, Fat, and Protein (3 lectures)

1. Review of anaerobic and aerobic metabolism
2. Effect of training on fuel utilization
3. Relationship of training diet to fuel use

C. Carbohydrate and Performance (4 lectures)

1. Dietary carbohydrate as source of glycogen
2. Simple and complex carbohydrates in the diet
3. Solid vs. liquid consumption pre-, during, and post-exercise
4. Glycogen supra compensation
5. Case Study: Carbohydrate Recommendations for an Endurance Athlete

D. Protein Nutrition for the Athlete (3 lectures)

1. Function and metabolism of protein
2. Protein requirements of athletes
3. Protein supplementation
4. Amino acid supplementation

E. Applying Theory to Practice: Eating Strategies During Training and Competition (4 lectures)

1. Daily food choices and decisions: cafeterias and/or apartment living
2. Training table practices
3. Pre-event meals
4. Eating on the road
5. Food consumption while changing time zones
6. Case Study: The Traveling Athlete
7. Case Study: The Collegiate Athlete

F. Fluid Replacement: Issues and Recommendations (4 lectures)

1. Function of water and electrolytes
2. Mechanisms of water loss
3. Fluid replacement guidelines
4. Characteristics of fluid replacement beverages
5. Barriers to fluid intake
6. Case Study: Fluid Replacement

G. The Role of Vitamin and Minerals in Performance (4 lectures)

1. Overview of functions with emphasis on these as micronutrients
2. Needs of athletes
3. Assessment of supplement needs
4. Iron nutriture of athletes
5. Amenorrhea and risk to osteoporosis
6. Research findings on vitamin and mineral supplementation on performance
7. Case Study: The Over-Supplemented Athlete

H. Evaluating Sports Nutrition Claims (4 lectures)

1. The value of the scientific method
2. Laws that regulate advertising and marketing of supplements
3. Evaluation of advertisements
4. Evaluating the written word vs. original research
5. Case Study: The Case For and Against Chromium Piccolinate
   (This topic will change as the popular press promotes different products.)

I. The Fallacies of Ergogenic Aids (3 lectures)

1. Pharmacologic ergogenic aids
2. Nutrition ergogenic aids
   (Note: discussions to include topical issues such as blood doping, bicarbonate loading, human and plant steroids, bee pollen, non-vitamin compounds and caffeine)

J. Weight Gain and Loss in Athletes (3 lectures)

1. Recommended strategies for gain and loss
2. The relationship of rapid weight loss to performance
3. When weight loss goes too far: disordered eating
4. Case Study: The Disordered Eating Athlete

K.. The Role of Nutrition for the School-Age Athlete (2 lectures)
1. Nutrient needs of growing children
2. Incorporating the healthy diet for growth with sports performance
3. Sports nutrition as a vehicle for nutrition education in schools

L. Sports Nutrition for Special Populations (3 lectures)
1. The physically challenged athlete
2. The pregnant athlete
3. The older athlete

M. Student Presentations (3 lectures)
Students will distribute and present their 2 page paper to their peers and summarize the topic..

IV. Evaluation Methods

3 exams @ 100 pts	300 pts
1 review of a sports nutrition issue	100 pts
5 Case Studies (combination of group participation and individual written analysis) @ 10 pts	50 pts
	450 pts

90% or greater = A, 80% or greater = B, 70% or greater = C, 60% or greater = D, less than 60% = F

Students may earn points towards their participation and any in-class case study analysis only if they are present on the day the discussion occurs.

V. Required Textbook

Williams, MH. (1995). Nutrition for Fitness and Sport, 4th edition. Dubuque, IA: Wm. C. Brown Communications, Inc.

VI. Special Resource Requirements

Several relevant videotapes and slide sets are owned by the instructor and The Department of Food and Nutrition; these are regularly updated depending on the department and library budgets. These include:

Videotapes

Eating Healthy for Sports. (1992) Yardley, PA: Turner Multimedia. 10 N. Main St., Yardley, PA 19067-9986, 800-344-6219.

Nutrition and Eating Disorders Series. (1990) Wilkes Barre, PA: Karol Video, 350 N. Pennsylvania Ave. , P. O. Box 7600, Wilkes-Barre, PA 18773-7600, 800-524-1013. Note: Includes three parts, Afraid to Eat: Eating Disorders and the Student Athlete, Out of Balance: Nutrition and Weight, and Eating Disorders: What Can I Do? Produced by the national Collegiate Athletic Association (NCAA).

The Performance Factor. (1990) Chicago, IL: Mediatech, Inc., Dept. E, 110 West Hubbard, Chicago, IL 60610, 312-828-1146. Produced by the Gatorade Sports Science Institute.

Making Smart Choices About What Athletes Eat. (1994) Chicago, IL: The Gatorade Company, The Gatorade Sports Science Institute. 800-616-GSSI.

Body Culture. (1989) Chicago, IL: National Live Stock and Meat Board, 444 N. Michigan Ave., Chicago, IL 60611.

Slides

Eating Disorders and Exercise. (1992) Brookline, MA: Nancy Clark, Sports Medicine Brookline, 830 Boylston St., Brookline, MA 02167, 617-739-2003.

Sports Nutrition: How to be Physically Fit and Nutritionally Sound. (1990). Brookline, MA: Nancy Clark, Sports Medicine Brookline, 830 Boylston St., Brookline, MA 02167, 617-739-2003.

Champion Foods-Nutrient Heroes. (1990) Shingle Springs, CA: Nutrivisuals, P.O. Box 1367, 5620 Old French Town Road, Shingle Springs, CA 95682, 916-677-1969.

VII. Bibliography

Relevant books and serial publications are in Stapleton Library or in the instructor's personal library. These are regularly updated depending on the department and library budgets.

Books

Benardot, D.. (1993). Sports Nutrition: A Guide for the Professional Working with Active People. 2nd edition. Chicago, IL: American Dietetic Association

Berning JR, Steen SN. (1991) Sports Nutrition for the 90s, The Health Professionals' Handbook. Aspen Publishers, Inc, Gaithersburg MD, 1991.

Burke, L. and Deakin, V. (1994) Clinical Sports Nutrition. Sydney, Australia: McGraw Hill Book Co.

Clark, N. (1990). Nancy Clark's Sports Nutrition Guidebook. Champaign, IL: Leisure Press.

Coleman, E. (1992). Eating For Endurance. Palo Alto, CA: Bull Publishing.

Einsenman, P. (1990). Coaches Guide to Nutrition and Weight Control. Champaign, IL: Human Kinetics Publishers.

Food Power: A Coaches Guide to Improving Performance. (1994). Rosemont, IL: National Dairy Council.

Hickson , J. F., & Wolinsky, I. (Eds.). (1989). Nutrition in Exercise and Sport. Boca Raton, FL: CRC Press.

Jennings, D. S. & Steen, S. N. (1993). Sports Nutrition for the Child Athlete. Chicago, IL: The American Dietetic Association.

McArdle, W. D., Katch, F.I., & Katch, V.L. (2nd ed.). (1991). Exercise Physiology: Energy, Nutrition, and Human Performance. Philadelphia, PA: Lea and Febiger.

Neiman, D. C. (1990). Fitness and Sports Medicine. Palo Alto, CA: Bull Publishing.

Peterson, M., & Peterson, K. (1988). Eat to Compete: A Guide to Sports Nutrition. Chicago, IL: Year Book Medical Publishers.

Smith, N.J., & Worthington-Roberts, B. (2nd ed.). (1989). Food for Sport. Palo Alto, CA: Bull Publishing.

Williams, C. & Devlin, J. (1992). Foods, Nutrition, and Sports Performance. London, England: E & FN Spon.

Williams, M. (1989). Beyond Training: How Athletes Enhance Performance Legally and Illegally. Champaign, IL: Leisure Press.

Journals and Serial Publications

The following journals and serials publications will be used to develop primary reference lists each semester.

American Journal of Clinical Nutrition. Bethesda, MD: The American Society for Clinical Nutrition.

Gatorade Sports Science Institute. Chicago, IL: The Quaker Oats Company.

International Journal of Sports Nutrition. Champaign, IL: Human Kinetics Publishers.

Journal of The American Dietetic Association. Chicago, IL: The American Dietetic Association.

Journal of Health Education. Reston, VA: Association for Advancement of Health Education.

Journal of Physical Education, Recreation, and Dance. Reston, VA: American Alliance of Health, Physical Education, Recreation and Dance.

Journal of Sports Medicine and Physical Fitness. Hagerstown, MD: Lippincott/Harper.

Medicine and Science in Sports and Exercise. Baltimore, MD: The American College of Sports Medicine.

Nutrition Today. Baltimore, MD: Williams and Wilkins.

The Physician and Sportsmedicine. Minneapolis, MN: McGraw-Hill Healthcare Publications.

Tufts University Diet and Nutrition Newsletter. Boston, MA.

FDNT 245 – Sports Nutrition Syllabus (Distance Education)

Instructor: Rita M. Johnson, PhD, RD, LDN
Office: Ackerman 14
Phone: 724- 357-3281
Office Hours: Posted on-line
Email: Rita.Johnson@iup.edu

Telephone messages should be left at the number above. Answering machine is always on. Messages may also be left in the instructor's WebCT mailbox for FDNT 245.

I. Catalog Description

Emphasizes knowledge and application of sports nutrition principles. The impact of the macro- and micro-nutrients on physical performance will be discussed in light of current scientific research and applied to realistic dietary recommendations for all types and levels of athletes.

II. Course Objectives

Upon completion of this course students will:

1. identify concepts of normal nutrition that relate to the needs of exercising individuals.
2. evaluate current research about carbohydrate, lipid, and protein to the actual needs of all types and levels of athletes.
3. recommend realistic food choices for all levels of exercising children, adolescents, and adults using current research.
4. discuss fluid needs of and compare fluid choices for exercising people.
5. evaluate research about vitamin and mineral supplementation on athletic performance.
6. discuss special topics of interest to competitive athletes (e.g. carbohydrate loading, iron nutriture, amenorrhea/osteoporosis, eating disorders).
7. identify dietary behaviors which enhance performance for all types and levels of athletes.
8. evaluate selected ergogenic aids utilizing claims in the popular press combined with research findings.
9. provide a written critique of sports nutrition information in "popular press" magazines and/or sports nutrition misbeliefs and present a summary to their peers.

III. Course Outline

Course content and assignments are located on the WebCT Homepage of FDNT 245, Sports Nutrition.

You will post your Module assignments in one of two places:

1. The topic area with your name on it is used for private postings that can only be viewed by you or your instructor.
2. Other topic areas will be labeled according to the assignment for that Module. For example, your review of an ergogenic aid must be posted in the public area designated for that topic.

Note that module quizzes and assignments are due by Sunday at 11:00 pm of the week assigned below. All assignments and the quiz for the last module are due by 11:00 pm on the last day of class, based upon the IUP course calendar.

Date	Topic	Text Reading and Assignment	Posting Requirements
Module 1	Introduction to Sports Nutrition and Evaluating Sports Claims	Chapter 1 and Chapter 10 (pp 327 – 336) Assignment: Sports Supplement Posting Quiz 1	Quiz/ Assignment due Sunday of Week (date here)
Module 2	Defining and Measuring Energy	Chapter 2 Assignment: Calculating Calorie Needs	Quiz/ Assignment due Sunday of Week (date here)
Module 3	Energy Systems and Exercise	Chapter 3 Quiz 2	Quiz/ Assignment due Sunday of Week (date here)
Module 4	Carbohydrates and Exercise	Chapter 4 Assignment: Eating a High Carbohydrate Diet Quiz 3	Quiz/ Assignment due Sunday of Week (date here)
Module 5	Protein and Exercise	Chapter 5 Assignment: Assessing Protein Needs Quiz 4	Quiz/ Assignment due Sunday of Week (date here)
Module 6	Fats and Exercise	Chapter 6 Quiz 4	Quiz/ Assignment due Sunday of Week (date he Quiz/ Assignment due Sunday of Week (date here)re)
Module 7	Water, Electrolytes, and Fluid Replacement	Chapter 7 Assignment: Evaluating and Recommending Fluid Replacement Beverages Quiz 5	Quiz/ Assignment due Sunday of Week (date here)
Module 8	Vitamins and Exercise	Chapter 8 Quiz 6	Quiz/ Assignment due Sunday of Week (date here)
Module 9	Minerals and Exercise	Chapter 9 Assignment: Should I Take a Vitamin and Mineral Supplements?	Quiz/ Assignment due Sunday of Week (date here)

		Quiz 7	
Module 10	Diet Planning: Food First	Chapter 10 and 12 Assignment: Eating On The Road Quiz 8	Quiz/ Assignment due Sunday of Week (date here)
Module 11	Body Weight and Body Composition	Chapter 11 and 13 Quiz 9	Quiz/ Assignment due Sunday of Week (date here)
Module 12	The School-Age Athlete	Posted Readings Assignment: Post Ergogenic Aid Review	Quiz/ Assignment due Sunday of Week (date here)
Module 13	Sports Nutrition for Special Populations	Posted Readings Quiz 10	Quiz/ Assignment due last day of class (date here)

IV. Evaluation Methods

Quizzes	300 pts
1 Review of an Ergogenic Aid	100 pts
7 Web Assignments	50 pts
	450 pts

A = 90% or greater
B = 80% - 89%
C = 60 – 69%
D = 50 – 59%
F = less than 60%

VI. Required Textbook

Dunford, M. & Doyle, J. A. (2008) *Nutrition for sport and exercise.* Belmont, CA: Thomson Wadsworth.

VI. Course Policies

A. All coursework and quizzes must be completed by the posted deadlines or a zero grade will be earned.
B. Quizzes must be completed in sequential order.
C. Reading the text and examining assigned websites or other readings is important to earn a high grade in this class.
D. Please contact the instructor for this course using the email feature within WebCT only. Using email outside of WebCT will result in email not being answered.

E. All assignments must be posted within WebCT. While students may compose their assignments in another program, it shall be cut and pasted into WebCT for submission. DO NOT send attachments.

F. Keep a record and a copy of materials that you submit through WebCT in case there are computer problems.

G. Read your WebCT email at least every other day.

H. Incomplete grades will only be earned by students whose work, which so fare as it has progressed, is a passing grade, but is incomplete due to unforeseen circumstances. The incomplete grade shall be accompanied with a written agreement by the student and instructor to show how the course will be completed.

I. Students that have technology difficulties shall contact the IT Support Center at hhp://www.iup.edu/itsupportcenter. The phone number is 724-357-4000. The email is : IT-Support-Center@iup.edu. Students may walk-in to the support center on the IUP campus at Suites on Grant – Lower – Suite G35.

Directions to Module 1 within Web CT

1. If the University Wide Undergraduate Committee logs into WebCT (http://webct.iup.edu)
2. Use "iupwuc" as the WebCT ID and "guest" as the Password.
3. See FDNT 245 Sports Nutrition listed on the account.
4. View Module 1 and its contents.

FDNT 245 Distance Education

Sample Lesson for Module 1: Introduction to Sports Nutrition

Introduction

In this module students are introduced to a variety of topics that sports nutritionists encounter. These include: answering questions about supplements, evaluating diets, and providing correct recommendations for fluid replacement. Students will use reputable websites for sports nutrition information. This introduction also alerts students to the recommended credentials of individuals who claim to be sports nutritionists.

Resources Available

Recommended websites

The Gatorade Sports Science Institute – www.gssiweb.com
The National Collegiate Athletic Association – www.ncaa.org
The Office of Dietary Supplements - http://dietary-supplements.info.nih.gov/
The Food and Drug Administration – www.fda.gov
Nutrition.gov – www.nutrition.gov
Consumer Labs – www.consumerlabs.com
Supplement Watch – www.supplementwatch.com

Play Clean: Nutrition to get you to the next level
http://www.youtube.com/watch?v=Vrf5Eid8fzw

Objectives from the Power Point Lesson

1. Define key terms such as exercise physiology, nutrition, physical activity, exercise and sport.
2. List and explain basic training and sports nutrition goals.
3. Identify basic nutrition standards and guidelines and indicate when these guidelines are applicable to athletes.
4. Discuss the purity, legality, ethics, safety, and effectiveness of dietary supplements.
5. Distinguish between types of research studies, weak and strong research designs and correlation and causation.
6. Explain the importance of using recommendations based upon current scientific evidence (i.e. evidence-based) and ways that research results may be misinterpreted.
7. Discuss the role of the Internet in finding sports nutrition research and information.
8. Compare and contrast the academic training and experience necessary to obtain various exercise and nutrition certifications.

Applied Learning Activity

Each student will choose a sports nutrition supplement and post answers to questions about the marketing techniques and scientific evidence to supports its efficacy.

Quiz

Students will take a timed quiz consisting of multiple choice questions.