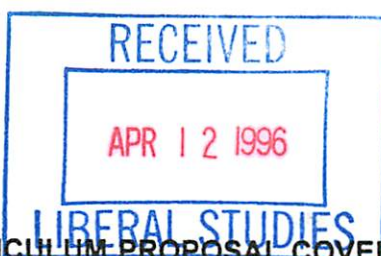


LSC Use Only  
Number: \_\_\_\_\_  
Submission Date: \_\_\_\_\_  
Action-Date: \_\_\_\_\_



UWUCC USE Only  
Number: 96-15  
Submission Date: 1/28/97  
Action-Date: App Senate App 3/11/97

**CURRICULUM PROPOSAL COVER SHEET**  
University-Wide Undergraduate Curriculum Committee

**I. CONTACT**

Contact Person Rita M. Johnson Phone 3281  
Department Food and Nutrition

**II. PROPOSAL TYPE (Check All Appropriate Lines)**

\_\_\_\_\_ COURSE \_\_\_\_\_  
Suggested 20 character title

\_\_\_\_\_ New Course \* \_\_\_\_\_  
Course Number and Full Title

XX Course Revision FN 245, Sports Nutrition  
Course Number and Full Title

\_\_\_\_\_ Liberal Studies Approval + \_\_\_\_\_  
for new or existing course Course Number and Full Title

\_\_\_\_\_ Course Deletion \_\_\_\_\_  
Course Number and Full Title

\_\_\_\_\_ Number and/or Title Change \_\_\_\_\_  
Old Number and/or Full Old Title  
New Number and/or Full New Title

XX Course or Catalog Description Change FN 245, Sports Nutrition  
Course Number and Full Title

\_\_\_\_\_ PROGRAM: \_\_\_\_\_ Major \_\_\_\_\_ Minor \_\_\_\_\_ Track

\_\_\_\_\_ New Program \* \_\_\_\_\_  
Program Name

\_\_\_\_\_ Program Revision \* \_\_\_\_\_  
Program Name

\_\_\_\_\_ Program Deletion \* \_\_\_\_\_  
Program Name

\_\_\_\_\_ Title Change \_\_\_\_\_  
Old Program Name  
New Program Name

**III. Approvals (signatures and date)**

Joanne B. Steiner Department Curriculum Committee  
Joanne B. Steiner Department Chair  
Mary E. Swenlin 3/27/96 College Curriculum Committee  
Carleen G. Jovi College Dean

+ Director of Liberal Studies (where applicable)

\* Provost (where applicable)

**Proposal to Change FN 245, Sports Nutrition, from a 1 credit to a 3 credit course.**

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**FN 245****Sports Nutrition****(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.

**I. Catalog 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
	<hr/>
	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.

### **Summary of Proposed Revisions**

The proposed revision for this course is to increase it from one to three credits with an accompanying increase in the amount and depth of information to be discussed. This revision also deletes FN 143, Nutrition and Wellness, as an accepted prerequisite. The 1.5 credits of nutrition in this course does not provide enough background for a 3 credit course.

### **Justification/Rationale for the Revision**

Sports nutrition information, research, and claims have greatly increased since this course was first proposed. A one credit course does not meet the need of most students who are interested in this topic. Most Sports Nutrition courses are three credit courses (see Appendix 2)). Other universities that offer a 3 credit course in sports nutrition include: Slippery Rock University, AHea (Allied Health) 320, Nutrition and Exercise (3 crd) and Marywood College, ND (Nutrition and Dietetics) 331, Sports Nutrition (3 crd).

The majority of students enrolled in Spring, 1995 agreed that a three credit course should be developed (see Appendix 3).

# OLD SYLLABUS OF RECORD

**FN 245**

**Sports Nutrition**

**1 cr.**

## **I. Course Description**

This course will advance students' nutrition knowledge with special application to the optimal nutrient needs and nutrition practices of athletes to maximize performance. The fallacies of ergogenic aids will also be discussed. Prerequisite: FN 143, FN 145, or FN 212.

## **II. Course Objectives**

Students will:

1. apply concepts of normal nutrition to the needs of exercising individuals.
2. understand issues of interest to competitive athletes (e.g. carbohydrate loading, fluid replacement, protein needs, iron nutriture).
3. identify dietary behaviors which enhance performance for young and adult athletes.
4. evaluate selected ergogenic aids using a scientific basis.
5. 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**

- A. Introduction/What is Sports Nutrition?/What is a Sports Nutritionist? (1 lecture)
  1. Sports nutrition as a special interest
  2. Recommended preparation for sports nutritionists
  3. References for sports nutritionists
- B. The Energetics of Exercise: Fuel Utilization of Carbohydrate, Fat, and Protein (1 lecture)
  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 (2 lectures)
1. Dietary carbohydrate as source of glycogen
  2. Simple and complex carbohydrates in the diet
  3. Carbohydrate consumption pre-, during, and post-exercise
  4. Glycogen supracompensation
- D. Protein Nutrition for the Athlete (1 lecture)
1. Protein requirements of athletes
  2. Protein supplementation
  3. Amino acid supplementation
- E. Applying Theory to Practice: Eating Strategies During Training and Competition (1 lecture)
1. Daily food choices and decisions: cafeterias and/or apartment living
  2. Training table practices
  3. Pre-event meals
  4. Eating on the road
- F. Fluid Replacement: Issues and Recommendations (2 lectures)
1. Mechanisms of water loss
  2. Fluid replacement guidelines
  3. Classifications of fluid replacement beverages
- G. The Role of Vitamin and Minerals in Performance (1 lecture)
1. Overview of functions with emphasis on these as micronutrients
  2. Needs of athletes
  3. Recommendations for supplementation when necessary
- H. Weight Gain and Loss in Athletes (2 lectures)
1. Recommended strategies for gain and loss
  2. The relationship of rapid weight loss to performance
  3. When weight loss goes too far: eating disorders
- I. The Role of Nutrition for the School-Age Athlete (1 lecture)

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

J. The Fallacies of Ergogenic Aids (2 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)

#### IV. Evaluation Methods

3 exams @ 50 pts	150 pts
1 review of a sports nutrition issue	50 pts
	_____
	200 pts

#### V. Required Textbook

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

#### VI. Special Resource Requirements

Several relevant videotapes are owned by the instructor and The Department of Food and Nutrition. Others will be borrowed from the Dairy and Nutrition Council Mid East, located in Pittsburgh.

#### VII. Bibliography

There are hundreds of pertinent research articles about sports nutrition. In lieu of listing these, relevant books and serial publications appear below.

##### Books

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. (1991). Rosemont, IL: National Dairy Council.

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

Marcus, J. (1986). Sports Nutrition: A Guide for the Professional Working with Active People. Chicago, IL: 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, M. (1989). Beyond Training: How Athletes Enhance Performance Legally and Illegally. Champaign, IL: Leisure Press.

Williams, M. (3rd ed.). (1992). Nutrition for Fitness and Sport. Dubuque, IA: Brown Publishers.

### **Journals and Serial Publications**

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.

Sports Medicine Digest. Van Nuys, CA.

Sports Nutrition News. Evanston, IL.

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

Tufts University Diet and Nutrition Newsletter. Boston, MA.



### **Letters of Support**

This course develops and expands sports nutrition information in FN 212, Nutrition (1 class hour), FN 145 (1 class hour), and FN 143 ( 1 class hour). A course taught by the Department of Health and Physical Education, HP 343 Exercise Physiology, also overviews the importance of nutrition in athletic performance. The Health and Physical Education Department was contacted on July 12, 1995 (see memo on following page).

- |                    |   |
|--------------------|---|
| September 13, 1995 | Requested written support from Dr. James Mill and received his verbal statement of support.   |
| September 13, 1995 | Requested support from Dr. Arch Moore and received his verbal statement of support.   |
| September 28, 1995 | Requested written support from Dr. Mill.  |
| November 21, 1995  | Dr. Mill stated that this course would fit into an athletic training curriculum and voiced his support. He stated that a written statement was forthcoming. |

July 12, 1995

To: Jim Mill  
Arch Moore  
Ed Sloniger

From: Rita Johnson  
e-mail: Rita\_Johnson

Subject: Proposal to increase FN 245, Sports Nutrition to 3 credits

cc: Joanne Steiner, Chair

Attached is my proposal to increase the Sports Nutrition course from one credit to three. I have found from teaching this course 4 times that my original idea of needing only 1 credit was not a good one. Additionally, since then information about sports nutrition has increased.

Because this course affects students in your department, I am requesting your critique and a letter of support to forward to the University Undergraduate Curriculum Committee.

Included with this packet are both the proposed and current syllabi. While many topics remain the same between the syllabi, additional class time to discuss them and additional activities to apply them will enhance students' learning.

I have also included 2 appendices which support increasing the credits for this class.

I will be out of town until mid-August and will call you when I return or at the beginning of the semester. I would like to forward this to our college curriculum committee in the early fall, in hopes of having it through the university committee by next spring.

Thank you for your consideration; please copy this to other faculty who are interested.

## Appendix 1

### Evaluation Form for Course Assignment

### Evaluation for Sports Nutrition Issue Review

Name \_\_\_\_\_

Sports Nutrition Topic chosen : \_\_\_\_\_

Instructor comments upon submission of topic:

Instructor initials: \_\_\_\_\_

#### Evaluation of One Page Review

I. The **format** of this review is:

typed and legible? / 6

single-spaced? / 4

lacking misspelled words? / 4

grammatically correct? / 6

written using appropriate sentence  
structure and a logical development / 14

appropriate in its listing of references / 6

\_\_\_\_\_

/ 40

II. The **content** of this review :

incorporates scientific facts in the explanation / 20

is accurate in its interpretation and recommendations / 30

incorporates references within the discussion / 10

\_\_\_\_\_

/ 60

III. For distribution, this review:

was copied dark enough and stapled

if needed, revision was submitted with original

\_\_\_\_\_ This paper should be copied and distributed to each class member by the date specified on the syllabus.

\_\_\_\_\_ This paper needs minor revisions; please make corrections and distribute to each class member by the date specified on the syllabus.

\_\_\_\_\_ This paper needs many revisions; please see your instructor for assistance.

## Appendix 2

### Sports Nutrition Curriculum Ideas

# Sports Nutrition Curriculum Ideas: Responses to a SCAN Survey

by Beth Goddard, RD, and Nancy Clark, MS, RD

In the Spring 1994 issue of *SCAN'S PULSE*, SCAN members who teach sports nutrition classes to college students were asked to provide information on several aspects of sports nutrition curriculum.

Responses were received from 22 college sports nutrition educators affiliated with 21 institutions (see box below). Of these respondents, 15 teach at the undergraduate level, five teach at the graduate level, and two teach a combination of graduate and undergraduate classes. Presented here is a summary of the survey results.

## Course Titles

The titles of the courses taught among the 21 institutions are very similar. The most typical titles include:

- Sports Nutrition
- Nutrition and Physical Activity
- Nutrition and Human Performance
- Nutrition for Health and Physical Fitness

## Enrollment

The following enrollment profile was reported:

- The majority of students taking sports nutrition courses are majoring in dietetics/nutrition; physical education; athletic training; or exercise physiology/science.

- About 50% of the courses are open to the general student body.
- 68% of the courses are offered as elective courses; 14% are required courses; and 18% are either elective or required, depending upon the student's major.

## Prerequisites

For the 15 undergraduate courses described, respondents reported:

- 4 (27%) have no prerequisite.
- 8 (53%) require a basic nutrition course.
- 5 (33%) require a physiology course.
- 2 (13%) require a biology course.

Among the five graduate courses described:

- 4 (80%) require a physiology course.
- 4 (80%) require a basic nutrition course.

- 3 (60%) require biology and chemistry courses.

These do not add up to 100% because the different courses have overlapping prerequisites. One graduate course had no prerequisites. Among educators who teach both graduate and undergraduate courses, a basic nutrition course is the common prerequisite.

## Classroom Hours

Most courses described in the survey are 13 to 14 weeks in duration. Twenty-one of the 22 responders indicated the frequency and classroom hours for their courses:

- 9 courses meet once a week for 2 to 3 hours.
- 8 courses meet twice a week for 1 to 1½ hours.
- 2 courses meet twice a month for 4 hours.
- 1 course meets three times a week for 1 hour.

- 1 course meets once a week for 1 hour.

## Common Objectives

The following list compiles the objectives common to most courses described by respondents. By the end of the semester, the student would be able to:

- Critically evaluate literature on sports nutrition
- Discuss physiology of normal digestion and absorption of nutrients
- Analyze nutritional requirements of healthy individuals in the life cycle and in sports exercise
- Explain water, electrolyte, and temperature regulation at rest and during physical activity
- Identify dietary recommendations for particular athletes
- Evaluate selected ergogenic aids using scientific basis
- Understand techniques of body composition and analysis

## Sample Course Syllabus

A course syllabus was provided with 19 surveys. Topics typically covered in a 13- to 14-week semester are:

- Carbohydrate
- Protein
- Fat
- Water, fluid, electrolytes, and temperature
- Vitamins and minerals

(Continued on page 11)

## Institutions Represented By The Survey

Adelfi University	Montana State University
Arizona State University	Phoenix College
California State University—Chico and Fresno	Rush University
Case Western Reserve University	Slippery Rock University
De Anza College	Texas Women's University
Illinois State University	University of Houston
Indiana University	University of Iowa
Indiana University Pennsylvania	University of New Hampshire
Iowa State University	University of New Mexico
	University of Minnesota
	University of Montana
	University of Utah

## Curriculum

(Continued from page 10)

- Nutrition assessment and management of an athlete
- Weight management of an athlete
- Eating disorders
- Nutritional needs of special populations
- Pre- and post-exercise nutrition
- Ergogenic aids
- Body composition
- Additional topics: Vegetarian diets; The sports nutritionist; Exercise and disease prevention

## Texts/Resources

The most common texts and resources used in the courses include:

- *Nutrition for Fitness and Sport* (Williams)
- *Sports Nutrition for the '90s* (Berning and Steen)
- *Eating and Endurance* (Coleman)
- *Nancy Clark's Sports Nutrition Guidebook* (Clark)
- Ross Laboratories' videos on anabolic steroids
- Nancy Clark's Sports Nutrition Slide Show, and Eating Disorders Slide Show
- National Collegiate Athletic Association's videos on eating disorders
- *Sports Nutrition: A Guide for the Professional Working with Active People* (Benardot/ADA-SCAN)

## Class Structure

Most courses are primarily lecture-based, with lab work also provided:

- 7 (32%) of the courses are 100% lecture

- 3 (14%) of the courses include hands-on experiences (5% of time)
- 12 (55%) of the courses have labs (5% to 25% of time)

## Lab Experiences

The courses that provide labs tend to offer the following:

- Body composition assessments (primarily skin-fold)
- Assessment and taste-testing of sports drinks, energy bars, and other sports nutrition supplements
- Case studies of athlete/team with nutritional needs, actual intake, and recommendations
- Critical analysis of sports nutrition information in the popular press

## Words of Wisdom

The sports nutrition educators offered the following advice to those hoping to enter teaching:

- Keep up with the current literature, because students want the most up-to-date information.
- Plan practical, hands-on experiences.
- Enjoy it! All respondents commented on how much they enjoy teaching the class, because the students were fun. ■

*Beth Goddard is a graduate student at Massachusetts General Hospital, Institute for Health Professionals, Boston, MA. Nancy Clark is director of Nutrition Services at Sports Medicine Brookline, in the Boston area, and a Sports editor of SCAN'S PULSE.*

## SCOPING SCAN MEMBERS

by Charlene Harkins, M.Ed, RD



**Roberta  
Schwartz  
Wennik, MS,  
RD**

*Edmonds, WA*

**Academic Background:** MS in Nutrition, University of Washington 1991; BA in Interior Design, University of California, 1970.

**Current Position:** Owner and principal of HEALTHPRO™

**Duties and Projects:** Freelance writing for magazines, authoring books, public speaking, educating on the community and college levels, and private consulting.

**The Best Part of My Job:** Being able to exercise my entrepreneurial spirit and creativity to benefit others. Setting my own hours is also an asset.

**Past Works of Interest:** In January 1993, I received a US patent for a nutrient monitoring system I created, developed, and researched at the University of Washington. The results of the study were presented at the 1991 ADA Annual

Meeting. The system is a "connect-the-dots" approach to keeping track of two nutrients at a time. Presently, this system is available in my book, *Drawing the Line on Fat and Cholesterol*. (Editor's Note: See page 16 for a review of this book).

**Projects of Interest:** I'm embarking on a unique approach to nutrition counseling, which I call VISIT BY MAIL™—health consultations through phone, fax, and mail. This service is designed for those people, primarily executives, who need nutrition counseling but can't seem to find the time to visit a dietitian.

**My Fitness Routine:** I jog or ride my bike three or four times a week, unless it's raining (I live in the Seattle area!), and then I use my treadmill. ■



## Appendix 3

### Student Opinions from Spring, 1995 Student Evaluations

Additional Student Evaluation Questions  
Spring, 1995

Students enrolled in Sports Nutrition were asked about developing this course into a three credit course. 13 of 20 students agreed that this should occur. Four students felt that the course should remain as it is; 3 did not answer the question.<sup>1</sup>

Eight students provided written comments on this issue. The following are their verbatim statements to the question: "What was the weakest feature of this course, i.e. something the instructor should try to change?"

1. "I think that it is an important topic and there is enough info that can be elaborated on or go more in depth into for it to be a 3 credit class."
2. "I think the course would be a very interesting 3 credit course. One day a week is a limited amount of time to create interest."
3. "This course should be changed to 3.0 credits - there is too much information, and it is important to both nutrition majors and phys.ed. majors."
4. "The class consisted of too much material for a 1 credit course. I would have gotten more out of the class if we had it more often."
5. "The amount of credits. The wasn't enough time to learn a lot of the material in the book. The class would be more appealing if there was more credits."
6. "That it's only one day a week I feel that this class would be more beneficial if it we 2 or 3 credits."
7. "Not enough time, for such an interesting subject!!"
8. "Credits - I think this would be a valuable 3 credit class. There is so much to learn in this area of nutrition."

<sup>1</sup> Original data and written remarks are available from Rita Johnson.