

CUYAMACA COLLEGE
COURSE OUTLINE OF RECORD

NUTRITION 158 – NUTRITION FOR FITNESS AND SPORTS

3 hours lecture, 3 units

Catalog Description

Investigates the effects of nutrition and various dietary regimens on athletic performance, physical fitness and general health. Compares the physiological effects of optimal nutrition vs. inadequate nutrition for the general population as well as athletes. Cultural, sociological and psychological influences will be examined. Discussion of “fads” and dietary supplements is included.

Prerequisite

None

Course Content

- 1) Impact of nutrition on general health
- 2) Society’s impact on nutritional practices for the general population as well as active/athletic people including hype vs. truth, promotion of “supplements” to gain the physical edge, how the media promotes a certain “body image,” and how the “fast food” craze has become an integral part of our society. Examination of how nutritional behaviors affect society as a whole in terms of general health of the population, economics, food related illnesses, and chronic disease
- 3) Basic nutrients (protein, carbohydrates, fats, vitamins, minerals, water) and their importance in a nutritious diet and their effects on physical fitness and athletic performance.
- 4) Individual dietary analysis to examine energy needs, body composition and fitness-related needs. Individual analysis of each student’s present diet and fluid intake for nutritional adequacy and develop modifications as appropriate to the specific needs of his/her metabolism and energy expenditures
- 5) Cultural influences on body image, performance, exercise and dietary choices. How to incorporate culturally-specific foods into a balance diet
- 6) Contemporary and often controversial diets, supplements and other performance enhancing factors
- 7) How to compare scientific information with manufacturer’s claims regarding nutritional strategies and products
- 8) Positive or negative impact that nutrition, body image, exercise, weight control and supplementation can have on a person’s psychological state relative to athletic performance as well as general health

Course Objectives

Students will be able to:

- 1) Describe the six basic nutrients, their food source and their functions in the human body and their effects on physical fitness and athletic performance.
- 2) Evaluate energy and caloric needs for the general population, active individuals and those participating in various types of competitive sports to determine individual nutritional needs.
- 3) Develop a personal dietary strategy (including fluid intake and pre-exercise meals) based on size, age, gender and energy expenditure.
- 4) Describe the importance of body composition (fat vs. lean) to athletic performance while contrasting body composition of athletes versus the general population.
- 5) Examine and discuss cultural differences relative to nutrition and body image.

- 6) Describe societal influences on dietary choices and conversely the impact of nutritional practices on our society.
- 7) Develop strategies to successfully scrutinize “hype” from truth relative to food, supplements and exercise advertising.
- 8) Examine the importance of monitoring fluid and electrolyte balance during exercise, training and competition.
- 9) Describe possible heat disorders and measures for preventing them.
- 10) Describe the impact of psychological factors on performance, body image and nutritional choices.
- 11) Evaluate current nutritional practices such as “carbohydrate loading” for safety and effectiveness.
- 12) Investigate authoritative sources for nutritional information relating to athletic performance.
- 13) Analyze the effects of supplements, steroids, mood modifiers and other chemicals on health and athletic performance.

Method of Evaluation

A grading system will be established by the instructor and implemented uniformly. Grades will be based on demonstrated proficiency in subject matter determined by multiple measurements for evaluation, one of which must be written essay exams, skills demonstration or, where appropriate, the symbol system.

- 1) Quizzes and exams that measure students’ ability to identify, explain, describe and/or provide examples of nutritionally balanced foods and healthy eating habits.
- 2) Personal nutrition assignment in which students perform a computer analysis of their daily diets, compare their nutritional intake to daily recommended allowances, and submit a plan for modifying their diets to maximize performance.
- 3) Written case study analysis in which students assess the nutritional needs of various populations based on age, gender, activity level and culture.

Special Materials Required of Student

Calculator

Minimum Instructional Facilities

Smart classroom

Method of Instruction

- 1) Lecture and group discussion
- 2) Nutritional analysis software

Out-of-Class Assignments

- 1) Assigned reading
- 2) Personal nutrition assignment
- 3) Research on various commercial sport nutrition claims
- 4) Case study/diet plan for specific, assigned population

Texts and References

- 1) Required (representative example): Williams, et al. *Nutrition for Health, Fitness and Sport*. 11th edition. McGraw Hill, 2017.
- 2) Supplemental:
 - a. American College of Sports Medicine position papers on nutritional issues

Student Learning Outcomes

Upon successful completion of this course, students will be able to:

- 1) Identify the six classes of nutrients by name, function, caloric energy in a gram, food source, and range of caloric amount in total diet.
- 2) Identify the unique nutritional needs of active individual and athletes.

- 3) Understand appropriate timing of nutrient intake before and after exercise to maximize performance and recovery.