KIN A283: NUTRITION, FITNESS, AND PERFORMANCE

Item	Value
Curriculum Committee Approval Date	12/09/2020
Top Code	130600 - Nutrition, Foods and Culinary Arts
Units	3 Total Units
Hours	54 Total Hours (Lecture Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S), • Pass/No Pass (B)

Course Description

An applied nutrition course for individuals interested in health, fitness, and athletics. Principles of nutrition are studied and applied to the athlete and active individuals. Includes pre and post event food and fluid selection, nutrient requirements, supplements, muscle mass and body fat related to performance. Enrollment Limitation: FN A136; students who complete KIN A283 may not enroll in or receive credit for FN A136. Transfer Credit: CSU; UC: Credit Limitation: Any or all of these HLED, KIN, PE Theory courses combined: maximum credit, 8 units.

Course Level Student Learning Outcome(s)

1. Plan and explain the rationale for the selection of meals and snacks to promote good health and peak physical performance for an identified athlete.
2. Evaluate nutrition information for accuracy and reliability.

Course Objectives

- 1. Analyze the effect of nutrition on health, fitness and physical performance. (SCANS Information).
- 2. Describe the various tools used to evaluate dietary patterns and apply these tools to the assessment of diets: RDA, MyPyramid, Dietary Guidelines, and nutrition information on labels. (SCANS Thinking).
- 3. Identify major nutrients their food sources and their role in health. (SCANS Information).
- 4. Apply knowledge about nutrition learned in this class to his/her current life style and physical performance. (SCANS Information, Personal Qualities).
- 5. Accurately record foods eaten in a survey period. (SCANS Information).
- 6. Enter foods eaten into the computer and receive a correct printout. (SCANS Technology, Information).
- 7. Extract data concerning diet from the printout and complete worksheets analyzing this data. (SCANS Information, Thinking).
- 8. Use food labels to evaluate food choices and make healthy food selections. (SCANS Information, Resources).
- 9. Plan meals using the MyPyramid for an individual who is active in a variety of different sports. (SCANS Information, Resources).
- 10. List the symptoms of dehydration and its affect on athletic performance. (SCANS Information).
- 11. Evaluate different fluid replacers and recommend the correct beverage for different activities. (SCANS Information, Resources).
- 12. List symptoms of different eating disorders and appropriate resources for treatment. (SCANS Information, Resources).
- 13. Define the different energy pathways and how they impact athletic performance and food choices. (SCANS Information, Systems).
- 14. Define carbohydrate and apply this knowledge to the endurance athlete. (SCANS Information).
- 15. Define protein and apply this knowledge to the strength athlete, make appropriate recommendations for the correct amount of protein in the diet. (SCANS Information).
- 16. Define fat and its implications for cancer and heart disease. (SCANS Information).
- 17. Identify sources of reliable nutrition information and nutrition misinformation. (SCANS information, Thinking).
- 18. Identify specific nutritional needs during pregnancy, childhood, and in the elder population. (SCANS information).

Lecture Content

The relationship of nutrition to fitness health and athletic performance Thinking critically about nutrition reliable nutrition information and “red flags” indicating misinformation. What is a healthful diet. Dietary Guidelines and Food Guide MyPyramid and nutrition labels. How the body uses food energy metabolism food energy and energy balance. Weight control methods myths and realities. How to lose weight and how to gain weight properly eating disorders anorexia nervosa bulimia and binge eating and each disorders effect on health and athletic ability. Different energy pathway systems ATP-PC Anaerobic and Aerobic and how they relate to different sports events and workouts. Carbohydrates; their definition and role in nutrition health and athletic performance. Special attention will be given to the requirements of endurance athletes including carbohydrate loading. Listing of foods high in carbohydrate and evaluation of carbohydrate in the students personal diet will be required. Proteins; their definition and role in nutrition health and athletic performance. Special attention will be given to the requirements of body builders and other athletes vegetarian diets. Fats; their definition and role in nutrition health and athletic performance. Special attention will be given to the diets of individuals wishing to reduce body fat and serum cholesterol as well as the risk factors for heart disease. Evaluation of personal diet for total fat monounsaturated polyunsaturated saturated fat and trans fats and recommendations for change for good health will be evaluated in worksheets. Vitamins; their definition and role in nutrition health and athletic performance. Discussion will be included on vitamin requirements food sources and the value and risks of mega-doses. J. Minerals; their definition and role in nutrition health an d athletic performance. Discussion will include mineral requirements food sources and the value and risks of mega-doses. Special attention will be given to iron deficiency anemia and the importance the affect of strength training on bone density and osteoporosis. Define ergogenic aids and discuss some of the more common aids used among athletes. K. Fluid requirements during exercise including fluid before during and after exercise. Special discussion will be included on the risks of dehydration. Discuss the pros and cons of some of the common sports drinks.

Nutrition and physical fitness for everyone discussion of the major fitness principles covered in class and implications for students and their clients. Nutrition and physical performance including pre-competition meals competition nutrition eating at all day athletic events and post competition meals. Nutrition and fitness during pregnancy childhood and aging. Diet and the relationship to diseases: heart disease cancer and diabetes.

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)
- DE Online Lecture (02X)
- DE Live Online Lab (04S)
- DE Online Lab (04X)

Instructional Techniques

Lecture, including video and slide presentations, and individual worksheets. Quizzes may be completed by the individual or in a group which will promote learning and interaction between students. Individual performance will be judged by a midterm and final completed without assistance from others.

Reading Assignments

Student will spend approximately 2-3 hours per week on assigned readings from the textbook, research articles, and instructor handouts.

Writing Assignments

Students will complete written assignments, including essays, quizzes, and research projects throughout the semester.

Out-of-class Assignments

Student will spend approximately 6 hours per week on out-of class assignments, including reading assignments, written assignments, and research projects.

Demonstration of Critical Thinking

Student evaluation will be a combination of written work sheets and examination. Each student will complete a computer analysis of his/her diet including computer printout and worksheets evaluating carbohydrate, protein, fat, vitamins, and minerals, and total calories in relation to their own body weight and activity level. Worksheets will be evaluated on neatness, accuracy, and written expression. A combination of quizzes and exams will be used to evaluate learning.

Required Writing, Problem Solving, Skills Demonstration

Each worksheet will require written answers that demonstrate a proficiency in English writing skills. Neatness and promptness are also considered important to promote good work habits. Critical thinking skills will be promoted through comparison of the students personal diet against the standards discussed in class and through recommendations for dietary changes.

Eligible Disciplines

Nutritional science/dietetics: Masters degree in nutrition, dietetics, or dietetics and food administration OR bachelors degree in any of the above AND masters degree in chemistry, public health, or family and consumer studies/home economics OR the equivalent. (Note: A bachelors degree in nutrition, dietetics, or dietetics and food administration, and certification as a registered dietician, is an alternative qualification for this discipline.) Masters degree required. Title 5, section 53410.1 Physical education: Masters degree in physical education, exercise science, education with an emphasis in physical education, kinesiology, physiology of exercise, or adaptive physical education, OR bachelors degree in any of the above AND masters degree in any life science, dance, physiology, health education, recreation administration, or physical therapy OR the equivalent. Masters degree required.

Textbooks Resources

1. Required Dunford, M. and Doyle, J. A.. Nutrition for Sport Exercise,, 4 ed. Belmont, CA: Wadsworth Publishing, 2018