

Northern Marianas College

CURRICULUM ACTION REQUEST

Effective Semester / Session: Spring 2012

Type of Action:

- ☐ New
- ☒ Modification
- ☐ Move to Inactive (Stop Out)
- ☐ Cancellation

Course Alpha and Number: HE 230

Course Title: Nutrition and Health

Reason for initiating, revising, or canceling:

This course guide is being modified to add the online course option, change in textbook edition, update the course guide in general to meet the required 3 year update.

Lisa A. Lunde

12/12/2011

Proposer

Date

Dr. Alfredo De Torres

12/12/2011

Department Chair

Date

Barbara Merfalen

12.13.11

Dean of Academic Programs and Services

Date

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Course Guide

Course: HE 230 Nutrition and Health

1. Department

Science, Mathematics, Health and Athletics

2. Purpose

HE 230 introduces students to the scientific principles of food and the basic elements of nutrition with the emphasis on food sources and the functions of nutrients for good health. It will provide knowledge on basic human nutrition and nutritional problems common in today's world. Students will be exposed to healthy food choices, diet planning, fitness, nutrients, body composition as well as different nutritional concerns through the various stages of life.

3. Description

A. Required/Recommended Textbook(s) and Related Materials

Required:

Whitney, Ellie and Rolfes, Sharon, Understanding Nutrition, 11th ed. Wadsworth Inc., Published at Thomson Learning, 2008.

Readability Level: Grade 13

B. Contact Hours

1. **Lecture: Face to Face Option:** 3 hours per week / 45 hours per semester

2. **Lab:**

3. **Other: Online Option:** Varies (students are EXPECTED to spend a minimum of 3 hours per week on the online HE 230 course site) 3hrs/week
45 hours/semester

C. Credits

1. **Number:** 3

2. **Type:** Regular Degree Credits

D. Catalogue Course Description

This course covers the basic elements and principles of nutrition including nutrients, food sources of nutrients, and the essentials of a balanced diet. Although basic scientific principles of nutrition will be the primary focus of the course, practical applications for nutrition will also be emphasized. In addition to learning how the body handles food, students will learn to analyze personal eating habits, develop a personal nutrition plan, distinguish between nutrition fact and fiction, identify relationships between nutrition and disease, and finally, integrate nutrition information into their daily lives. English Placement Level: EN 101 (Offered Fall and Spring)

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E. Degree or Certificate Requirements Met by Course

A passing grade of a "C" or higher will fulfill the Health core requirement for all those majoring in Nursing as well as all NMC degrees except BS in Elementary Ed. (This course is required for all Nursing students).

F. Course Activities and Design

Face to Face Option: Course activities include lectures, projects, research, and presentations. Projects, group interaction, and research are all designed to stimulate discussion and learning, and provide skills in preventive health and decision making for lifestyle behavior changes. Discussions on current nutrition knowledge will help students develop an understanding of their own eating habits and will enable them to have a better understanding of basic nutrition concepts.

Online Option: This course option is being taught using a Distance Learning Format (online) Internet based Instruction. Each Student will be required to access the Internet to participate as a student in this class. There will be many different learning activities provided each week (chapter readings, assignments to be submitted thru the online class site, discussion forums etc.). Students are responsible for keeping up with the assignments on a weekly basis and adhering to the designated due dates. As this course is offered online, distance learning format, students can complete weekly readings and assignments any time during the week; however, all readings and assignments need to be completed by the designated due date (ample time is given between assignments and managing your time is your responsibility). Assignment Due Dates are outlined in the Monthly Calendars as well as on the online class site. Projects, group interaction, and research are all designed to stimulate discussion and learning, and provide skills in preventive health and decision making for lifestyle behavior changes

Discussions on current nutrition knowledge will help students develop an understanding of their own eating habits and will enable them to have a better understanding of basic nutrition concepts.

4. Course Prerequisite(s); Concurrent Course Enrollment; Required English/Mathematics Placement Level(s)

Prerequisites: None

English Placement Level: EN 101

Mathematics Placement Level: None

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5. Estimated Cost of Course; Instructional Resources Needed

Cost to the Student: Tuition for a 3-credit course; student flat fee, and the cost of the textbook.

Cost to the College: Instructor's salary

Instructional resources needed for this course include: laptop computer, various online programs (Elluminate, Yackpack, Breeze etc.), internet connection, web cam, microphone, powerpoint projector, various educational DVD's.

6. Method of Evaluation

Students' grades will be based on the regular letter grade system as described below:

- A: Excellent – grade points: 4.0;
- B: Above average – grade points: 3.0;
- C: Average – grade points: 2.0;
- D: Below average– grade points: 1.0;
- F. Failure – grade points: 0.0.

NMC's grading and attendance policies will be followed.

7. Course Outline

This is a topical outline and does not necessarily indicate the sequence in which the material will be presented.

- 1.0 An overview of Nutrition
 - 1.1 Why you eat what you do
 - 1.2 The science of nutrition
- 2.0 Planning a Healthy Diet
 - 2.1 Body indicators of nutritional status
 - 2.2 Estimating your nutritional status from your diet
 - 2.3 The food guide pyramid
 - 2.4 Changing your eating habits for good
- 3.0 Digestion, Absorption and Transport
 - 3.1 Digestion: Preparing nutrients for absorption
 - 3.2 The cell: Where nutrients are used
 - 3.3 Circulation: Delivering nutrients where they are needed
 - 3.4 Excretion: Getting rid of waste

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- 4.0 Carbohydrates
 - 4.1 Simple Carbohydrates
 - 4.2 Complex Carbohydrates
 - 4.3 Health Effects and Recommended Sugar Intake
 - 4.4 Health Effects and Recommended Fiber Intakes
- 5.0 Lipids
 - 5.1 Functions of lipids
 - 5.2 Types of lipids in foods
 - 5.3 Amounts of lipids in foods
 - 5.4 How your body digests and absorbs lipids
 - 5.5 How your body makes its own lipids
 - 5.6 Lipoproteins and how lipids get around in your body
 - 5.7 Lipids and cardiovascular disease
 - 5.8 Lipids and cancer
- 6.0 Proteins
 - 6.1 Proteins-built from amino acids
 - 6.2 The body's need for components of protein
 - 6.3 The many functions of protein
 - 6.4 You body's handling of protein
 - 6.5 Food technology, proteins, and protein derivatives
 - 6.6 Problems from too little or too much protein
 - 6.7 How much protein do you need?
- 7.0 Metabolism
 - 7.1 Chemical Reactions in your body
 - 7.2 Breaking down nutrients for Energy
- 8.0 Energy Balance and Body Composition
 - 8.1 Energy In
 - 8.2 Energy Out
 - 8.3 Body Weight vs. Body Composition and your Health
 - 8.4 The relationship between body weight and energy balance
- 9.0 Weight Management and Eating Disorders
 - 9.1 Problems and Causes of Obesity
 - 9.2 Weight Loss Strategies
 - 9.3 Techniques for adding body weight
 - 9.4 Classifications of eating disorders
 - 9.5 Possible causes of eating disorders
 - 9.6 Treatments for and Getting help

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- 10.0 Vitamins
 - 10.1 Vitamins-similar but different
 - 10.2 How vitamins function
 - 10.3 The fat-soluble vitamins
 - 10.4 The water-soluble vitamins
 - 10.5 What about vitamin supplements?
- 11.0 Minerals
 - 11.1 Minerals - many elements
 - 11.2 Major vs. Mineral Minerals
 - 11.3 Food sources of minerals
 - 11.4 Your intake: Staying near recommended levels
 - 11.5 Ways to evaluate your mineral intake
- 12.0 Water
 - 12.1 Water Balance
 - 12.2 The consequences of dehydration
 - 12.3 Sources of water
 - 12.4 Recommendations of fluid intake
- 13.0 Fitness
 - 13.1 Benefits of Fitness
 - 13.2 Developing Fitness
 - 13.3 Energy systems and Nutrients to support Activities
- 14.0 Nutrition for Pregnancy and Lactation
 - 14.1 The importance of gaining enough weight
 - 14.2 Nutritional needs during pregnancy
 - 14.3 Toxic substances to avoid during pregnancy
 - 14.4 Growth and Development during pregnancy
- 15.0 Nutrition for Infants, Children and Adolescents
 - 15.1 Rapid infant growth and high nutrient needs
 - 15.2 Considering whether to breast-feed or bottle-feed
 - 15.3 Solid foods for older infants
 - 15.4 Mealtime with Toddlers
 - 15.5 Hunger and Malnutrition
 - 15.4 Childhood Obesity
 - 15.5 Nutrition at School
 - 15.6 The nutritional status and needs of today's teens
 - 15.7 Choices and Habits of Teens

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- 16.0 Nutrition for Adults of All Ages
 - 16.1 The gradual changes of aging
 - 16.2 How nutrition and fitness affect health and longevity
 - 16.3 How drugs interact with nutrients
 - 16.4 Influences of alcohol on nutrition and health
 - 16.5 Live well!
- 17.0 Diet and Health
 - 17.1 Nutrition and Infectious Diseases
 - 17.2 Nutrition and Chronic Diseases
 - 17.3 Recommendations
- 18.0 Consumer Concerns
 - 18.1 Foodborne Illnesses
 - 18.2 Environmental Contaminants
 - 18.3 Food Additives
- 19.0 Hunger and Global Environment
 - 19.1 Hunger in the U.S.
 - 19.2 Hunger Worldwide
 - 19.3 Solutions

8. Instructional Goals

This course will introduce students to:

- 1.0 The energy supplying nutrients: fats, carbohydrates, and proteins and their roles in nutrition (good and bad) ;
- 2.0 Appropriate and inappropriate foods;
- 3.0 Various diet planning principles and how to incorporate them into one's own life;
- 4.0 The benefits associated with physical activity, the components of a sound fitness or health program, and the fuels that are necessary for physical performance and daily activity
- 5.0 The roles of vitamins, minerals, water and fiber;
- 6.0 How nutrition and lifestyle choices impact the various stages of life; and
- 7.0 The relationship between various foods and diseases.

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9. Student Learning Outcomes

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

- 1.0 Explain the roles fats, carbohydrates, and proteins play in nutrition (good or bad);
- 2.0 Distinguish between appropriate and inappropriate foods;
- 3.0 Design a personal diet that is nutritionally sound;
- 4.0 Explain the benefits associated with physical activity, the components of a sound fitness and health program, and the fuels that are necessary for optimal physical performance and daily activity.
- 5.0 Explain the role of vitamins, minerals, water and fiber;
- 6.0 Describe how nutritional needs vary throughout life; and
- 7.0 Discuss the relationship between various foods and diseases.

10. Assessment Measures

Assessment of student learning may include, but not be limited to, the following:

- 1.0 Weekly assignments;
- 2.0 Class Labs and projects;
- 3.0 Classroom discussions and participation; and
- 4.0 Quizzes and exams.