

Course Syllabus

Principles of Nutrition (CHS 226)

1st semester 1438-1439 H

Program in which the course is offered:	Nursing program, Bachelor degree
Credit hours	3 theoretical hrs
total contact hours per semester	45 hours
Level at which this course is offered:	6 th level
Course prerequisites:	None
Time:	Sunday: 10.00 AM - 12.50 PM Tuesday: 1.00- 3.50 PM
Location:	KSU-College of Nursing Sunday: Class NO 7, Tuesday: Class NO 6
College member responsible for the course	Dr Mohammed Fawzi, Associate Professor
Contact information:	
Office Number:	2318; 2 nd Floor, College of Applied Medical Sciences
Phone :	Office: 014663942
Email:	mffarahat@ksu.edu.sa
Website:	http://fac.ksu.edu.sa/mffarahat
Office hours:	Tuesday: 10 A M to 12 At Noon Thursday: 10 A M to 12 At Noon

Course Description

The purpose of this course is to introduce the students to the composition of protein, fat, carbohydrates, vitamins and minerals, their types, functions, requirements and associated health problems. The course highlights the digestion of foods and absorption of various nutrients, energy expenditure, factors affecting the basal metabolic rate, the methods used to measure energy expenditure as well as Estimating total energy expenditure

Course Objectives

By the end of this course, students should be able to:

- Recognize all six classes of nutrients, their importance and function.
- Identify the relationship between food, nutrition and health.
- List functions and sources of macro and micronutrients.
- Recognize diseases related to specific nutrients deficiency.
- Distinguish basic digestion process of foods, their absorption and basic metabolism within the body.
- Illustrate factors affecting nutrients needs.

Teaching strategies

The course will be conducted in a form of lectures, class discussions, seminars and student presentations.

Learning Resources

Required Text (s)

- Martin Eastwood Edinburgh. (2003). Principles of Human Nutrition. Blackwell Science Ltd,
- Kathleen Mahan.L. Sylvia Escott-Stump and Janice L. Raymond. (2012). Krause's food and the nutrition care process. 13th ed. USA; Saunders.
- Sharon Rady Rolfes, Kathryn Pinna, and Ellie Whitney. (2009). Understanding Normal and Clinical Nutrition. 8th ed. USA; Wadsworth, Cengage Learning.

Essential References

- Sue Rodwell Williams. (2009). Basic Nutrition and Diet Therapy. 13 edition, Mosby.
- Sardesa VM. (2003). Introduction to clinical nutrition. 2nd ed. New York; Marcel Dekker, Inc.

Recommended Journals

- Journal of the American Dietetic Association. Available at <http://www.sciencedirect.com/science/journal/00028223>
- Annual Review of Nutrition. Available at <http://www.annualreviews.org/journal/nutr>
- Nutrition Reviews. Available at <http://nutritionreviews.oxfordjournals.org/>
- American Journal of Clinical Nutrition: Available at <http://ajcn.nutrition.org>

Electronic Materials and Web Sites

- Nutrition Information for you. Available online. [URL:http://www.nutrition.gov](http://www.nutrition.gov).

Topics to be Covered		
List of Topics	No of Weeks	Contact hours
- Introduction to Nutrition	2	6
- Food digestion and absorption of nutrients	2	6
- Energy	2	6
- Water and electrolytes	2	6
- Carbohydrates	1	3
- Proteins	1	3
- Lipids	1	3
- Minerals	2	6
- Vitamins	2	6

Schedule of Assessment Tasks for Students During the Semester

#	Assessment task (e.g. essay, test, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
a.	Mid term I	5- 7 th week	20 %
b.	Mid term II	10-12 th week	20 %
c.	Class discussion and assignment	Continuous	10 %
d.	Presentation	4 th to 14 th week	10%
e.	End Semester Exam	16 th -18 th wk	40 %

Week Due	Details
Weeks (1 and 2)	Introduction to Nutrition <ul style="list-style-type: none"> • Nutrients and their Classification • Food functions and nutrition assessment methods • Types of Nutrient Deficiency and stages of its Development
Weeks (3 and 4)	Food digestion and absorption of nutrients <ul style="list-style-type: none"> • Digestion and absorption in various parts of the digestive system • Mechanical and chemical digestion as well as various absorptive mechanisms
Weeks (5 and 6)	Energy <ul style="list-style-type: none"> • Various energy expenditure components • Factors affecting the basal metabolic rate • Methods used to measure energy expenditure
Weeks (7 and 8)	Water and electrolytes <ul style="list-style-type: none"> • Functions of water and major water compartments • Water gain and water loss • Classification of electrolytes and their functions
Week (9)	Carbohydrates <ul style="list-style-type: none"> • Properties of carbohydrates and their functions • Classification of carbohydrates, dietary fibers, and Sweetening agents • Benefits of dietary fiber and harmful effects of excessive intake
Week (10)	Proteins <ul style="list-style-type: none"> • Classification and functions of protein and amino acids • Gluconeogenesis and nitrogen balance • Protein requirements and health risks associated with high protein intakes • Vegetarian diet, types, benefits and potential risks
Week (11)	Lipids <ul style="list-style-type: none"> • Classification and functions of lipids • Food sources of lipids and fat requirements and associated risks
Weeks (12 and 13)	Minerals <ul style="list-style-type: none"> • Classification and functions of minerals • Sources, deficiency, toxicity and recommended daily allowances of various minerals
Weeks (14 and 15)	Vitamin <ul style="list-style-type: none"> • Classification and functions of vitamins • Sources, deficiency, toxicity and recommended daily allowances of vitamins

Course rules

Attendance: Attending at least 75% of the lectures is mandatory otherwise students will be denied access to the final exam. Students who arrive to class 15 minutes late for two times will be considered absent for one class.

Special examination: NO special examination will be given for students who have missed the scheduled examination time except in cases of special circumstances accompanied with the necessary documentation. In this case, students have to take the exam during the next week from the initial scheduled examination time.

Participations: Positive participation with the instructor is recommended, but side talks are prohibited.
10 % of the total marks are assigned for class discussion and participation

Using mobiles is prohibited during the lecture

Class Leader:

A class leader is a student in the class who will be chosen by the majority of class students. He should fulfill the following criteria:

- GPA: not less than 3.5 /5.00
- Good relationship with all students in the class
- High moral standards and effective communication skills.

Duties of the Class leader:

- Acquiring contact information from all students in the class
- Maintaining continuous contact with the course instructor with quick interaction
- Delivering information and answering questions to the students quickly
- Delivering students concerns, information and questions to the instructor quickly

Advantages for the class leader:

- If the Class leader is successful in performing the above mentioned duties, he will get the full mark in **Class discussion and participation** (10 marks)
- If the group leader fails in these duties, the instructor has the right to call for choosing another Class leader.