University of Nicosia, Cyprus

Course Code	**Course Title**	**ECTS Credits**
BIOL-221	Human Nutrition	6
Department	**Semester**	**Prerequisites**
Life and Health Sciences	Fall/Spring	None
Type of Course	**Field**	**Language of Instruction**
Required	Biology, Nutrition	English
Level of Course	**Year of Study**	**Lecturer**
1st Cycle	2nd	Dr. Elena Philippou
Mode of Delivery	**Work Placement**	**Co-requisites**
face-to-face	N/A	None

Objectives of the Course:

This course will cover the physiological metabolic requirements and the interrelationships of diet components which are determinants of human health and diseases. The main objectives of the course are to:

- Make students aware of healthy eating guidelines and their importance.
- Utilize case studies to demonstrate the relationship between diet and disease, the integration of body physiology requirements and the function and properties of the macronutrients (carbohydrate, protein and fat), vitamins, minerals, and water.
- Discuss the basic principles of the metabolic/hormonal pathways regarding nutrient homeostasis and water balance and get students to practice on calculations of metabolic rate and energy requirements.
- Use case studies to demonstrate the role of diet in helath and disease.
- Make students aware of the diagnostic criteria for eating disorders.
- Provide students the opportunity to review and report on relevant research literature.

Learning Outcomes:

After completion of the course students are expected to be able to:

1. Recall nutrition guidelines, classify the major food groups and discuss their importance in everyday diet and use the food pyramid in decision making about food choices.
2. Associate food sources and nutrient concentrations with the main metabolic requirements of the human body for water, energy, macronutrients, vitamins and minerals with regard to age, gender and the deficiency symptoms.
3. Calculate basic metabolic rate and energy requirements using standard calculations and explain the maternal, fetal and infant nutrient requirements
4. Differentiate the main causes of food borne disease and discuss their symptoms, prevention and treatment.
5. List and differentiate the diagnostic criteria of the major eating disorders.
6. Identify the main causes of food intolerances and allergies.

7. Recall the nutrition guidelines in relation to different life stages and life styles.
8. Use scientific literature to report on current issues related to human nutrition.

Course Contents:

1. Introduction to nutrition – basic concepts, Healthy eating, Mediterranean diet, overview of food groups
2. Food Carbohydrates: sugar, starch, fiber, health effects of carbohydrates
3. Food fat, cholesterol metabolism, atherosclerosis, and heart disease.
4. Food protein, vegetarianism
5. Energy homeostasis in humans, Scientific methods of measuring energy intake/expenditure, energy balance and obesity
6. Fat-soluble vitamins
7. Water-soluble vitamins
8. Minerals: calcium and magnesium
9. Iron and anaemia; Water
10. Food safety: foodborne illness
11. Pre-pregnancy, pregnancy and lactation
12. Nutrition Related to exercise, fitness and sports
13. Food allergies and intolerances
14. Eating Disorders

Learning Activities and Teaching Methods:

Lectures; Cooperative learning activities, Discussions; Review of literature.

Assessment Methods:

Assignments, Tests and Mid-term Exam; Final Exam

Required Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
J. Mann, S. Truswell	Essentials of Human Nutrition	Oxford University Press	2002	**ISBN:** 0198508611

Recommended Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
McGuire M, Beerman KA	Nutritional Sciences. From fundamentals to food.	USA: Wadsworth Cengage Learning	2007	978-0-534-53717-3
Gibney MJ, Lanham-New SA, Cassidy A, Vorster HH	Introduction to Human Nutrition	Oxford, UK: Wiley-Blackwell	2009, 2nd ed.	978-0-534-53717-3