INTRODUCTION TO HUMAN NUTRITION
COURSE OUTLINE

GENERAL

SCHOOL	AGRICULTURAL SCIENCES			
DEPARTMENT	FOOD SCIENCE AND NUTRITION			
LEVEL OF STUDIES	UNDERGRADUATE			
COURSE CODE	**MK215**	**SEMESTER**	**2nd**	
COURSE TITLE	INTRODUCTION TO HUMAN NUTRITION COURSE COORDINATOR: Eirini (Renata) Micha			
INDEPENDENT TEACHING ACTIVITIES (if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits)			**WEEKLY TEACHING HOURS**	**CREDITS (ECTS)**
Lectures			3	5
Laboratory/ Tutorial Exercises			2	
COURSE TYPE	SCIENTIFIC AREA | SKILLS DEVELOPMENT			
PREREQUISITE COURSES:	-			
LANGUAGE OF INSTRUCTION AND EXAMINATIONS:	GREEK			
IS THE COURSE OFFERED TO ERASMUS STUDENTS	YES (IN ENGLISH)			
COURSE WEBSITE (URL)	-			

LEARNING OUTCOMES

Learning outcomes

This is the core introductory course in nutrition science. It aims to introduce students to the basic concepts and fundamental principles of nutrition science. Specifically, it introduces the concepts of food and nutrient sources, dietary intake and nutritional status, and examines the relationship between dietary intake (foods, nutrients) and nutritional status. The course also aims to develop an understanding of nutritional requirements, of the assessment of the nutritional value of foods and of the principles on which population-level dietary recommendations are based. Finally, it familiarises students with the basic methodologies of nutrition science.

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

1) Describe the components of a healthy diet
2) Understand nutritional requirements, how they are met through food intake and how they translate into a balanced daily meal plan
3) Understand the biological role of essential nutrients and their dietary sources
4) Understand the relationship between dietary intake and nutritional status
5) Understand the scientific basis of population-level dietary recommendations
6) Use food composition tables to assess the composition of foods and dietary intake

General competences

- Independent work
- Promotion of free, creative and inductive thinking
- Search for, analysis and synthesis of data and information, using the necessary technologies

COURSE CONTENT

1st Week

- Basic concepts and definitions: History of nutrition and the development of nutrition science | Distinguishing dietary intake from nutritional status | Nutrients (macro- and micronutrients)

2nd Week

- Energy requirements: Energy requirements – energy balance – and their determinants | Methods for estimating energy requirements and body composition

3rd Week

- Carbohydrates: Sources, requirements, recommendations and biological roles | Dietary fibre | Added sugars | Glycaemic index

4th Week

- Proteins: Sources, requirements, recommendations and biological roles | Biological value | Essential amino acids | Nitrogen balance

5th Week

- Lipids: Sources, requirements, recommendations and biological roles | Classes of lipids

6th Week

- Fat-soluble vitamins: Sources, requirements, recommendations and biological roles | Effects of deficiency and excess

7th Week

- Water-soluble vitamins: Sources, requirements, recommendations and biological roles | Effects of deficiency and excess

8th Week

- Trace elements: Sources, requirements, recommendations and biological roles | Effects of deficiency and excess

9th Week

- Dietary recommendations: Recommended dietary intakes – definitions and basic principles | Population dietary recommendations – approaches, how they began and how they have evolved

10th Week

- Food composition tables: Understanding and use

11th Week

- Planning a balanced daily meal plan: methodology and use of new technologies

12th Week

- Healthy diet: How it is defined and what it includes | Mediterranean diet

13th Week

- Review and synthesis

TEACHING AND LEARNING METHODS - EVALUATION

DELIVERY	FACE-TO-FACE
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY	LECTURES PRESENTED WITH POWERPOINT USE OF A COMPUTER BY THE INSTRUCTOR DURING LECTURES LEARNING SUPPORT THROUGH E-CLASS
TEACHING METHODS	

Activity	***Semester workload (hours)***
LECTURES	39 *(13 weeks × 3 hours)*
TUTORIAL EXERCISES	26 *(13 weeks × 2 hours)*
INDIVIDUAL ASSIGNMENT WITHIN THE TUTORIAL EXERCISES	30
INDEPENDENT STUDY	30
Course total *(25 workload hours per credit)*	**125** *(5 ECTS)*

STUDENT PERFORMANCE EVALUATION	**1. WRITTEN EXAMINATION (60%)** -- Multiple-choice questions -- Critical-thinking and short-answer questions -- Solving calculation problems **2. LABORATORY GRADE (40%)** -- Individual written reports on the tutorial exercises (20%)

	-- Oral examination on the written reports (20%) -- Compulsory attendance of the tutorial exercises (prerequisite) To pass the course, students must obtain a passing grade in both components.

RECOMMENDED BIBLIOGRAPHY

- Byrd-Bredbenner C, Berning J, Kelley D, Abbot J. Wardlaw's Perspectives in Nutrition. 12th Edition. McGraw-Hill Companies, 2022
- Whitney E & Rolfes SR. Understanding Nutrition. 16th Edition. Cengage Learning, 2022
- Gibney MJ, Vorster HH, Kok FJ. Introduction to Human Nutrition [in Greek; translation eds A-L Matala and M Yannakoulia]. Athens: Parisianou Publications, 2015.

Selected scientific articles from the international literature; indicative journals: American Journal of Clinical Nutrition, European Journal of Clinical Nutrition, Lancet, New England Journal of Medicine, Circulation, PLOS Medicine, Diabetes Care