UCLouvain

wsbim1206

2023

From nutrient to food

3.00 credits	30.0 h	Q1

Teacher(s)	Cani Patrice ;
Language :	French > English-friendly
Place of the course	Bruxelles Woluwe
Prerequisites	*The prerequisite(s) for this Teaching Unit (Unité d'enseignement – UE) for the programmes/courses that offer this Teaching Unit are specified at the end of this sheet.*
Learning outcomes	**At the end of this learning unit, the student is able to :** 1 To acquire basic knowledge in nutritional sciences in order -to appreciate the reasons behind the diet advice -to have a critical view on nutritional publicity -and some ideas about nutrition education To this purpose, we will define the nutritional needs throughout the life cycle and in some physiological conditions. We will also tackle the risks of excess and deficiency in some nutrients and how to prevent or cure them. Eventually, we will describe the production, the composition and the methods of preservation of the main foods, including the novel foods.
Evaluation methods	A written exam covering all the themes of the course. The student must demonstrate their aptitude for critical and integrative reflection on the themes covered.
Teaching methods	Lectures and practical exercises carried out during the course.
Content	This course aims to provide to the students to acquire the basic knowledge related to the understanding of human body composition and the nutritional composition of foods (what are the types of nutrients and micronutrients). What are the food sources of nutrients/micronutrients, the physiological roles and their impacts on health in the event of deficiencies. At the end of this course, the student will be able to synthesize, describe and argue, based on their acquired knowledge, the impact of nutrients and certain foods on health. Topics covered will be: 1) how are the energy and nutritional needs of humans established in good health and in certain specific situations (example: growth, pregnancy, aging, athletes) 2) body composition (water, muscles, adipose tissue, bone mass, etc.) and the different methods and techniques for assessing body composition 3) the quantitative and qualitative requirements for different energy nutrients (proteins, lipids, carbohydrates) and non-energy nutrients (water-soluble and fat-soluble vitamins, minerals, trace elements, fibers) 4) the physiology and roles of each of these nutrients, their food sources with specific examples, but also the use of the food pyramid, deficiencies/excesses in these nutrients and associated pathologies 5) the first key physiological bases of the metabolism associated with these nutrients 6) certain methods of food preparation and preservation will be discussed with a view to understanding their impacts not only on energetic and non-energetic nutrients but also on their potential effects on human health (example: fermentation, freezing, etc.) The course focuses on concrete examples discussed during the course.
Inline resources	Several articles from the scientific literature, journals and other materials used for the preparation of the course are made available to students (Moodle).
Faculty or entity in charge	FASB

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Additionnal module in Biomedical Sciences	APPSBIM	3		
Minor in Biomedicine (openness)	MINSBIM	3		
Bachelor in Biomedicine	SBIM1BA	3	WFARM1009 AND WMD1105 AND WMD1106	