UCLouvain

wsbim1305

2025

Introduction to human nutrition

The version you're consulting is not final. This course description may change. The final version will be published on 1st June.

3.00 credits	30.0 h	Q1

Teacher(s)	Cani Patrice ;Delzenne Nathalie (coordinator) ;Smets Françoise ;
Language :	French
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.*
Main themes	1. To establish relationships between basic sciences and some points of normal or pathophysiological nutrition (from bench to bedside). 2. To present several facets of nutrition (clinical, prevention, research, industry,')
Learning outcomes	**At the end of this learning unit, the student is able to :** · Integration of molecular, biochemical and physiological approaches into some aspects of normal nutrition 1 · Integration of molecular, biochemical and physiological approaches into some aspects of pathophysiological nutrition · To develop critical thinking skills when facing nutrition problems
Evaluation methods	Written exam
Teaching methods	The methodology will combine lectures, analyzes of cases or data from the scientific literature, which may be offered in a flipped class, or accompanied by written work or to be presented orally.
Content	- To analyze the impact of nutrition in physiology and in the prevention and management of pathologies, illustrating how recent research and epidemiological data in the field of nutrition and health have made it possible to establish guidelines, to discover new therapeutic avenues - To understand the mechanisms of energy homeostasis by explaining the biological and molecular aspects of the mechanisms regulating food intake including the homeostatic (hunger, satiety) and non-homeostatic (the reward system) pathways, the gut-brain axis . - To address and understand the mechanisms of regulation of circadian rhythms and the impact on human nutrition - Basic notion to understand the different types of adipose tissue and apprehend their roles in physiology and physiopathology by including the factors that govern the regulation of anthropometric criteria and the risk factors associated in particular with obesity - To explore the influence of the gut microbiota on overall health and how it is modulated by diet - To analyze the impact of various diets with a focus on their nutritional composition, while demystifying popular ideas circulating around these diets. The use of dietary supplements and additives will also be addressed by examining their role, effectiveness or harmful effects - To address the problem of malnutrition, as defined by the World Health Organization, by evoking the different facets (over-nutrition and obesity, nutritional deficiency, especially in children ..), and by resituating nutrition problems in line with the objectives of sustainable development. -To present and integrate various facets of nutrition into aspects of disease prevention and clinical nutrition, with a focus on pediatric nutrition and obesity management in children, to specifically address dietary transition and interest multidisciplinary and integrated aspects in clinical nutrition.
Inline resources	Video and PDF of slides available on moodle
Faculty or entity in charge	SBIM

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	WFARM1221S AND WSBIM1206	
Advanced Master in Nutrition and Food Transition	NUTR2MC	3		