

Syllabus

Descrizione corso

Titolo insegnamento	Human Nutrition
Codice insegnamento	44714
Titolo aggiuntivo	
Settore Scientifico-Disciplinare	BIOS-06/A
Lingua	Inglese
Corso di Studio	Corso di laurea magistrale in Scienze degli alimenti per l'innovazione e l'autenticità
Altri Corsi di Studio (mutuati)	
Docenti	prof. Daniele Del Rio, Daniele.DelRio@unibz.it https://www.unibz.it/en/faculties/agricultural-environmental-food-sciences/academic-staff/person/44380
Assistente	
Semestre	Primo semestre
Anno/i di corso	2
CFU	6
Ore didattica frontale	60
Ore di laboratorio	-
Ore di studio individuale	90
Ore di ricevimento previste	18
Sintesi contenuti	-
Argomenti dell'insegnamento	ALIGNMENT: the course will be introduced by some basic concepts of human nutrition in order to align students with different study backgrounds. In particular, it will include a brief description of human physiology of the gastro-intestinal tract and accessory glands; digestion and absorption of macro- and micro-nutrients; concepts of bioavailability and essentiality of nutrients. The core course will then continue on the following topics: METABOLIC

	REGULATION: 1) metabolism during the postabsorptive and fasting phases; 2) metabolism during the postprandial phase; 3) integration of carbohydrate, protein and lipid metabolism among tissues and organs. ENERGY BALANCE: 1) measure and estimation of energy intake and expenditure; 2) energy balance and body composition. DIET-RELATED DISEASES: 1) chronic diseases linked to over-nutrition; 2) nutrient deficiencies and diseases linked to under-nutrition. CRITICAL NUTRIENTS IN WESTERN DIETS: 1) intrinsic, extrinsic and added sugars; 2) saturated fats and trans-fats; 3) sodium; 4) calcium and vitamin D; 5) dietary fibre.
Parole chiave	
Prerequisiti	
Insegnamenti propedeutici	
Modalità di insegnamento	Teaching will be carried out through classroom lectures and seminars, with the aid of slides that will represent educational material available online on the Elly platform https://elly.saf.unipr.it/2021/ in .pdf format. Pending new rules due to the evolution of the health situation, it might be possible the remote access for some lesson in asynchronous mode (uploaded on the Elly page of the course). During classrooms examples of numeric and problem-solving exercises will be presented. Based on rules and availability, there might be on-site visits to food companies in the Parma area, where specific nutritional aspects of their business model will be discussed, possibly through practical examples and/or hands-on experiments.
Obbligo di frequenza	No
Obiettivi formativi specifici e risultati di apprendimento attesi	At the end of the training activity, the student will acquire knowledge and skills related to the effect of nutrients/food/diets on human metabolism in the various physiological states. In particular, about knowledge and understanding skills, the student will be able to: 1) Understanding the processes of digestion and absorption of nutrients and other food components ; 2) Understanding how the human organism regulates the utilization of nutrients and energy substrates in the metabolic phases and how foods and nutrients affect the human organism; 3) understanding the metabolic bases of diet-related diseases; 4) being able to predict how changes in food composition,

	formulation or processing may affect the nutrition quality of human diets. About communication skills, the student will be able to present scientific issues in support or against a nutritional case study.
Obiettivi formativi specifici e risultati di apprendimento attesi (ulteriori info.)	
Modalità di esame	Final examination will be carried out through an oral interview, which may include the critical discussion of projects carried out by the student during the semester. If it is impossible to take the exam face-to-face due to rules imposed by the University, the exam will be carried out remotely through an interview through the Teams portal.
Criteri di valutazione	The final evaluation, in 30/30 score points, will depend on the assessment of the level of knowledge of the contents discussed during the course, of the ability to use sources of scientific information and on the following aspects:- Knowledge application; - Ability to analyze complex dataset and cases and draw conclusions; - Communication skills; Ability to gain knowledge. The praise is assigned in the case of reaching the maximum score on each item to which is added the mastery of the disciplinary lexicon.
Bibliografia obbligatoria	1) Keith Frayn & Rhys Evans. Human Metabolism: A Regulatory Perspective. 4th Ed. Wiley Blackwell 2019, Oxford (UK). 2) David A. Bender Introduction to Nutrition and Metabolism. 5th Ed. CRC Press, 2014, Boca Raton, FL (USA) 3) Selected scientific papers. 4) Notes and slides presented by the teacher
Bibliografia facoltativa	
Altre informazioni	
Obiettivi di Sviluppo Sostenibile (SDGs)	