**Human Nutrition**

Prof. Filippo Rossi

### **COURSE AIMS AND INTENDED LEARNING OUTCOMES**

The course aims to provide students with the rudimentary foundations and applications of nutritional sciences relative to the use of nutrients and other bioactive substances by the human body, in relation to the state of health of the individual. The course also aims to evaluate themain nutritional problems within the population, in order to improve quality of life and promote health through the prevention of nutrition related diseases.

At the end of the course, students will know: a) the basic principles behind the digestion and metabolism of nutrients and bioactive compounds; b) the nutritional characteristics of food; c) the relationship between nutrition and health (knowledge and understanding). Students will therefore be able to formulate foods consistent with the nutritional recommendations for the prevention of food-related diseases (ability to apply knowledge and understanding). They will also be able to critically evaluate the information disclosed on nutrition and health, including through their ability to independently find and consult reliable scientific information (independent judgment and learning ability).

**COURSE CONTENT**

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|  | ECTS |
| **Human Nutrition Module (Basic)*** The Meaning of Feeding, Nutrition and Dietetics.
* Digestive anatomy and physiology.
* Anatomy and physiology of the organs connected to the digestive system: *liver, pancreas, kidneys*.
* Food Sources. *Food categories and food composition.*
* Nutrients and Energy Balance. *Carbohydrates, lipids and proteins.*
* Protein, carbohydrate and lipid metabolism*.*
* Ethanol.
 | 2.0 |
| * Macrominerals.
* Microminerals.
 | 1.5 |
| * Water Soluble Vitamins.
* Fat-soluble vitamins.
* Bioactive compounds.
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| **Nutrition for Public Health Module** * Human nutrition and Health: *primary and secondary prevention.*
* Nutritional requirements for the Italian population*. The DRV of Nutrients and Energy for Italian population (LARN).*
* Epidemiology of nutrition-related diseases in Italy and globally.
* Adverse reactions to foods. *Allergies, intolerances* *and coeliac disease.*
 | 1.5 |
| **PRACTICAL CLASSES.** Evaluation of the nutritional characteristics of foods and implementation of simple nutrition education projects. | 1.0 |

***READING LIST***

-MARIANI, COSTANTINI, CANNELLA, TOMASSI. Alimentazione e Nutrizione Umana. Il Pensiero Scientifico (2016).

- PIGNATTI. Biochimica della Nutrizione, Società Editrice Esculapio (2022)

-RICCARDI, PACIONI, GIACCO, RIVELLESE. Manuale di nutrizione applicata. IV edizione, Idelson Gnocchi.

-SILVERTHORN, Fisiologia Umana VII edizione, Pearson (2017).

-SOCIETÀ ITALIANA DI NUTRIZIONE UMANA (SINU). Livelli di Assunzione di Riferimento di Nutrienti e Energia

per la Popolazione Italiana (LARN)-IV revisione- (2014).

-CONSIGLIO PER LA RICERCA IN AGRICOLTURA E L’ANALISI DELL’ECONOMIA AGRARIA (CREA).

Linee guida per una sana alimentazione (2018).

<https://www.crea.gov.it/web/alimenti-e-nutrizione/-/linee-guida-per-una-sana-alimentazione-2018>

-ISTITUTO EUROPEO DI ONCOLOGIA. Banca dati degli alimenti: [www.bda-ieo.it](http://www.bda-ieo.it)

***TEACHING METHOD***

The theoretical frontal lectures, which will be carried out with the support of PowerPoint presentations, will be used to present the concepts of the course programme.

Students will undertake practical classes on topics related to the nutritional characteristics of foods and food education projects.

The teaching material used in lectures (PowerPoint presentations) is considered an integral part of the reference reading material and will be available on the Blackboard platform.

***ASSESSMENT METHOD AND CRITERIA***

An oral exam. The interview will be aimed at verifying the knowledge acquired during the course, the student's communication skills, and their mastery of the lexicon. The exam will be based on three questions relating to the topics covered in class. Each answer will be assigned a maximum mark of 10/10, which will contribute towards the maximum achievable mark of 30/30. A mark of 30 cum laude will be assigned only if the maximum mark is achieved alongside a mastery of the discipline's specific vocabulary.

***NOTES AND PREREQUISITES***

Students should possess a basic knowledge of Biochemistry.

Information on office hours available on the teacher's personal page at <http://docenti.unicatt.it/>.