# UNIVERSITÀ DEGLI STUDI DI PALERMO

**Department: Biological, Chemical and Pharmaceutical Sciences and Technologies**

**A.Y. 2021/2022**

**DEGREE COURSE IN HUMAN FEEDING AND NUTRITION SCIENCES**

## Characteristics

## Educational objectives

In accordance to the qualifying objectives of the degree class LM-61, the course aims at training graduates, providing sound interdisciplinary scientific education in the field of human feeding and nutrition, capable of carrying out specialised tasks and complex activities in the evaluation, coordination, control, programming, planning, management and training in various professional contexts (healthcare, industry, regulatory), aiming at maintaining and promoting human health.
Therefore, the educational programme aims at providing the following skills:

a) Sound knowledge of the nutritional and hygienic-sanitary properties of the various food components;
b) in-depth knowledge of the contaminants present in food products, with particular attention to the sources of pollution, the ways in which foods can be contaminated and the specific mechanisms of the toxic action of the various xenobiotics;
c) Ability to evaluate the nutritional characteristics of foods and their modifications induced by technological and biotechnological processes;
d) Knowledge and ability to evaluate the bioavailability of nutrients in foods and food supplements and to predict their effects;
e) Ability to use nutritional strategies to prevent the onset of diseases related to nutrition excess or defect;
f) Acquisition of the tools for a correct assessment of body composition using methods for assessing body metabolism and energy expenditure;
g) Knowledge of the analytical methods for assessing food safety and suitability for human consumption;
h) Legislative knowledge of all the accreditation and surveillance procedures of laboratories and health facilities intended for the preparation, conservation and distribution of food;
i) Ability to participate actively in training, education and dissemination activities on food quality.

The educational programme is structured as follows: during the 1st year, students will study subjects aiming at obtaining a broad spectre preparation, deeply investigating, therefore, class specific subjects such as: chemistry of active biomolecules, nutrition biochemistry, alimentation and hormone control disorders, food chemistry and technology, hygiene and collective health, pharmacology and food regulations; 6 credits are provided for language skills (English – level B2)

The second course year mainly aims at the study of nutritional analysis methodologies, feeding in various physiological and pathological conditions and in metabolic syndrome.

The second year also provides an internship to be carried out at the university as well as at public and private companies accredited with the University of Palermo, and of the preparation of the degree dissertation, which must be related to an original experimental research carried out at the University or other public or private Research agencies, operating in the field of human feeding and nutrition.

## Professional opportunities

Profile:
Nutritional Biologist/Expert in Food Science and Human Nutrition
Functions:
The Degree Course provides graduates with the tools for investigating food styles and evaluating the healthy properties of foods and diets. The professional figure of the nutritionist biologist/expert in feeding and human nutrition sciences works at all levels of the food system (from the formulation to the distribution of foodstuff, from catering to the development of healthy eating styles). Graduates will be able to work with wide autonomy, taking also the responsibility for projects, structures and staff.

Legenda: Per. = periodo o semestre, Val. = Valutazione (V=voto, G=giudizio), TAF= Tipologia Attività Formativa (A=base, B=caratterizzante, C=Affine, S=stages, D=a scelta, F=altre)

Skills:
The skills of the graduate in Human Feeding and Nutrition Sciences include:
a) the development, formulation and enhancement of foodstuff with high nutritional impact (functional food, food for a particular diet and for special medical purposes),
b) the management of labelling and information relating to nutritional claims and more generally of the various aspects of communication;
c) the research and documentation of the health effects of food (health claims).
d) the assessment of the nutritional and sensorial quality and the management of the safety and suitability of food for consumption,
e) the proposal and verification of protocols for proper nutrition aimed at maintaining an optimal state of health,
f) the setting up and management of nutrition education programs targeted to the general population or specific groups;
g) the collaboration in food consumption surveys and nutritional surveillance programs;
h) the market research and related activities in relation to food production;
i) the research and development in the field of human nutrition;
l) the training of operators in the agro-food sector in the quality and safety fields;
m) teaching in schools of technical-scientific subjects concerning the food and nutrition area.

Professional opportunities:
Graduates of this course will be able to carry out professional activities in the food and human nutrition sector as non-medical nutritionists.
This course also allows access to PhD courses and graduate schools and also provides professional opportunities in the research sector. Employment and professional opportunities for graduates (DM March 16, 2007, Art. 3, paragraph 7) might also be found in food, dietetic, pharmaceutical companies, in the control and experimentation laboratories of technologies for new foods and in collective catering, performing roles of responsibility, coordination and consultancy. Thanks to their ability to verify the correct intake of foods to achieve optimal levels of nutrients and to maintain the state of health in groups and individuals, graduates will be able to plan and carry out food education, training and dissemination activities.
The profile of graduates of the LM-61, while culturally belonging to the Human Nutrition sector, cannot overlap the ones of Specialist in Food Science or nutritionist doctor.

**Final examination features**

The final examination consists of the public discussion, in front of a board of professors, of a written dissertation, prepared by the student about an original experimental research activity, carried out at Universities, Research Centres, Hospitals, Local healthcare Agencies or other private facilities under specific agreements with the University of Palermo. The final examination aims at completing the educational path, enabling students to improve their skills, knowledge, ability to apply knowledge, development of relational skills, communication skills and autonomy of judgment in the field of issues related to Human Feeding and Nutrition Sciences.

| Subjects 1 ° year | CFU | Sem. | Val. | SSD | TAF |
|---|---|---|---|---|---|
| 21008 - EATING DISORDERS AND HORMONAL CONTROL | 9 | 1 | V | | |
| *- ENDOCRINOLOGY*<br>*Citarrella(RU)* | *6* | *1* | | *MED/13* | *B* |
| *- PSYCHOLOGY OF FOOD BEHAVIOR DISORDERS*<br>*Contentezza(PC)* | *3* | *1* | | *M-PSI/01* | *C* |
| 21002 - NUTRITION BIOCHEMISTRI AND NUTRIGENOMICS | 9 | 1 | V | | |
| *- BIOCHEMISTRY OF NUTRITION*<br>*Schiera(PA)* | *6* | *1* | | *BIO/10* | *B* |
| *- NUTRIGENOMICS*<br>*Caradonna(PA)* | *3* | *1* | | *BIO/18* | *C* |
| 21003 - STRUCTURE AND FUNCTION OF ORGANIC MOLECULES IN FOODSTUFF | 9 | 1 | V | | |
| *- NUTRACEUTICALS*<br>*Almerico(PO)* | *3* | *1* | | *CHIM/08* | *C* |
| *- ORGANIC FOOD CHEMISTRY*<br>*Pibiri(PA)* | *6* | *1* | | *CHIM/06* | *B* |
| 20691 - ENGLISH LANGUAGE SKILLS - EQUIVALENT TO LEVEL B2 | 6 | 1 | G | | F |
| 21004 - FOOD CHEMISTRY AND TECHNOLOGY | 9 | 2 | V | | |
| *- FOOD CHEMISTRY*<br>*Di Stefano(PA)* | *6* | *2* | | *CHIM/10* | *B* |

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| Subjects 1 ° year | CFU | Sem. | Val. | SSD | TAF |
|---|---|---|---|---|---|
| *- FOOD SCIENCE AND TECHNOLOGIES*<br>*Planeta(PA)* | *3* | *2* | | *AGR/15* | *C* |
| 21009 - HYGIENE, PREVENTION AND FOOD SAFETY<br>*Valenti(PC)* | 6 | 2 | V | MED/42 | B |
| 21007 - PHARMACOLOGY, TOXICOLOGY AND FOOD REGULATIONS | 9 | 2 | V | | |
| *- PHARMACOLOGY AND NUTRITION*<br>*Notarbartolo Di Villarosa(PA)* | *6* | *2* | | *BIO/14* | *B* |
| *- REGULATIONS FOR HEALTH PRODUCTS AND SUPPLEMENTS*<br>*Cavallaro(PO)* | *3* | *2* | | *CHIM/09* | *C* |
| Free subjects | 12 | | | | D |
| | **69** | | | | |

| Subjects 2 ° year | CFU | Sem. | Val. | SSD | TAF |
|---|---|---|---|---|---|
| 20998 - METABOLIC SYNDROME AND GASTRO-INTESTINAL SYSTEM DISEASES AND FOOD ALLERGY | 9 | 1 | V | | |
| *- GASTROENTEROLOGY*<br>*Celsa(RD)* | *6* | *1* | | *MED/12* | *B* |
| *- GASTRO-INTESTINAL SYSTEM PATHOLOGY*<br>*Vasto(PA)* | *3* | *1* | | *MED/04* | *C* |
| 21035 - NUTRITIONAL ANALYSIS METHODOLOGIES, ALIMENTATION AND MORPHO-FUNCTIONAL OF THE GASTROINTESTINAL SYSTEM | 9 | 1 | V | | |
| *- MORPHO-FUNCTIONAL BASES OF THE GASTROINTESTINAL SYSTEM*<br>*Mule'(PO)* | *3* | *1* | | *BIO/09* | *C* |
| *- NUTRITIONAL STATE ASSESSMENT, PRINCIPLES OF DIET AND DIETOTHERAPY*<br>*Amato(PA)* | *6* | *1* | | *BIO/09* | *B* |
| 13351 - ADVANCED SKILLS RELATED TO THE LABOUR MARKET | 3 | 1 | G | | F |
| 13121 - PRACTICE | 3 | 1 | G | | F |
| 05917 - FINAL EXAMINATION | 27 | 1 | G | | E |
| | **51** | | | | |

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