UNIVERSITA' DEGLI STUDI DI MILANO
PROGRAMME DESCRIPTION - ACADEMIC YEAR 2021/22
MASTER DEGREE
Human Nutrition and Food Science (Classe LM-61)
Enrolled from 2017/18 academic year

HEADING

Degree classification - Denomination and code:	LM-61 Nutrition and health sciences
Degree title:	Dottore Magistrale
Length of course:	2 years
Credits required for admission:	180
Total number of credits required to complete programme:	120
Years of course currently available:	1st , 2nd
Access procedures:	Cap on student, student selection based on entrance test
Course code:	K05

PERSONS/ROLES

Head of Study Programme

Prof. Alberto Battezzati

Tutors - Faculty

Tutor per i piani di studio:
lettera iniziale cognome studenti A-CH: Prof.ssa Ernestina Casiraghi
lettera iniziale cognome studenti CI-D: Prof.ssa Alessandra Marti
lettera iniziale cognome studenti E-L: Prof.ssa Antonella Pagliarini
lettera iniziale cognome studenti M-Q: Prof.ssa Sabrina Dallavalle
lettera iniziale cognome studenti R-Z: Prof.ssa Stefania Iametti

Degree Course website

https://alimentazionenutrizione.cdl.unimi.it/

Phone 0250319184 Email: presidenza-anu@unimi.it

via Celoria 2 - Milano Città Studi Phone 0250316511-0250316512 Lunedì, mercoledì e venerdì dalle 10.30 alle 12.30; martedì e giovedì dalle 14 alle 16. Email: didattica.agraria@unimi.it

via Celoria 18 - Milano Città Studi Phone 0250325032 https://www.unimi.it/it/node/360 https://www.unimi.it/it/node/359

CHARACTERISTICS OF DEGREE PROGRAMME

General and specific learning objectives

The Master's degree programme in Human Nutrition and Food Science aims to provide advanced knowledge, and develop professional acumen in students so that they can help others develop a healthy approach to food, consistent with applicable regulations, thereby improving overall nutrition. The degree programme presents a holistic and systematic view of food quality, with a curriculum based on gaining an in-depth knowledge of food, consumers, and the nutritional challenges they face. The programme specifically aims to provide students with an understanding of the elements that make up food quality, and the ability to connect and consolidate these elements into a set of nutritional requirements appropriate for the general population, as well as targeted to specific population groups, and tailored to the needs of the individual, whilst respecting the demands and restrictions of the supply chain.

Expected learning outcomes

Graduates of Human Nutrition and Food Science must gain a knowledge base in, as well as the ability to understand and interpret, the following:

- the properties of food and its components, modifications to food according to technological processes, and the study of factors that govern bioavailability;
- technological processes for food preparation, and the processing of dietary supplements and foods intended for specific groups of consumers;
- food-safety and food-quality issues relating to biological, chemical, and physical contamination of food;
- principles of biochemistry, physiology, and human pathophysiology as they pertain to nutrition, with a special focus on malnutrition caused by over/under-eating;
- the influence of foods and the human microbiome on supporting good health and preventing disease;

- methods for assessing energy expenditures, nutritional values, and functional parameters;
- community nutrition;
- food-product market dynamics, and their effects on consumption and consumer behaviour;
- food regulations and nutrition policy, nutrition education and public health;
- foundations in statistics, biometrics, and epidemiology, and skills acquisition in:
- determining the nutritional quality of individual foods and innovative-product design;
- analysing, preventing, and managing nutritional risk;
- assessing the role of specific foods / components on health;
- assessing the influence of the human microbiome on wellness and disease prevention;
- evaluating indicators of nutritional health;
- adopting food-based strategies to promote health, and to prevent the insurgence of diseases;
- methods for surveying food consumption, and strategies for conducting nutritional monitoring on a population-group level;
- applying management and control systems aimed at ensuring food-product and food-service safety and quality;
- assessing nutritional policies, and producing food-education and consumer-education programmes;
- employing the scientific method to investigate and apply acquired knowledge and acumen to solving problems in human nutrition in a variety of contexts.

Graduates of this programme will further gain:

- the ability to express opinions based on their understanding of human nutrition, conscious of the ethical and social implications of their conclusions, and the ability to interpret data collected through the practical application of their knowledge;
- communication and interpersonal skills, the ability to convey ideas, discuss problems and find solutions; the ability to generate and present data, as well as to transmit and disseminate information on issues of human food and nutrition;
- life-long learning skills: the ability to continue one's education using a variety of resources, from books to databases to other baseline informational resources.

Professional profile and employment opportunities

Graduates of this programme will be ready for a professional career as a nutritionist in a variety of settings within the food system and industry (from formulating foods for distribution, to food service, to helping others make healthy food choices), and help support human health through an approach which is both distinct from, and yet coordinated with, the medical profession.

Those with a Master?s degree in Human Nutrition and Food Science have opportunities for senior positions within the food or pharmaceutical industry in terms of developing and promoting food products that are crucial for good nutrition (functional foods, foods developed for special diets and for specific medical concerns), the safe management of food fit for human consumption, nutritional and sensory quality assessments, as well as managing food-related public relations. They may also be tasked, as permitted under EU regulations, with generating nutritional claims, and guiding research and documenting health claims for foods.

Within the food-service or food-supply arenas, whether in a private or institutional setting, these graduates can work in programming, management, control, coordination, and training, implementing integrated systems to provide quality control on the service as rendered. Positions in leadership, coordination, consultancy, and research are available within institutions that deal with the effects of nutrition on human health. Graduates will further gain the ability to assess which foods, and in what amounts, are needed to reach optimal nutritional values to maintain good health at a group and individual level, as well as to design and conduct food education, training, teaching, and to produce publications.

Under the Classification of Professions established by ISTAT (2001), the most relevant professional opportunities are those identified as specialised professions in the life and health sciences (ISTAT code 2.3) and education, research, and related fields (ISTAT code 2.6).

For example, graduates would have the following skill sets:

a) development, formulation, and promotion of high-nutritional-impact food products (functional foods, foods developed for special diets and for specific medical concerns);
b) managing nutritional claims and other general aspects of food-related communications;
c) research and documentation on health claims;
d) assessing nutritional and sensory quality, and managing the safety and fitness of foods intended for consumption;
e) proposing and auditing protocols for proper nutrition intended to maintain optimal health;
f) establishing and managing food-education programmes aimed at the general population or specific groups;
g) working with surveys of food consumption, and nutrition-monitoring programmes;
h) conducting market research and other activities relating to the food supply chain;
i) research and development in human nutrition;
l) providing training on quality and safety issues to agriculture and food industry workers;
m) teaching nutrition and food safety as part of a school's technical or scientific curriculum.

Notes

Proficiency in English at a B1 level or higher, under to the Common European Framework of Reference for Languages (CEFR), is required for admission.

The B1-level requirement will be ascertained by the University Language Centre (SLAM) upon admission as follows:

- By a language certification at or above B1, obtained no more than 3 years earlier. For the list of language certifications recognized by the University please review: https://www.unimi.it/en/study/language-proficiency/placement-tests-and-english-courses/english-entry-tests. The certification must be uploaded when submitting the online application;

- By the English level achieved during a Bachelor's degree programme through SLAM courses and tests. The certificates must be less than four years old, and will be assessed administratively, without the applicant having to attach any certificates;
- By the entrance test, which will be delivered by the SLAM on 20 July and on 21 September 2021. All those who fail to submit a valid certificate or do not meet the required proficiency level will be invited to take the test through the admission procedure.

Candidates who do not sit or pass the entrance test will have until 31 December 2021 to obtain and submit one of the recognized certifications to the SLAM.

Students who do not meet the requirement by 31 December will not be admitted to the Master's degree programme and cannot sit further tests.

EXPERIENCE OF STUDY ABROAD AS PART OF THE TRAINING PROGRAM

The University of Milan supports international mobility by providing its students with the opportunity to spend study and internship periods abroad. It is a unique chance to enrich your educational path in a new exciting environment.

The agreements entered into by the University with over 300 universities from the 27 EU member countries and other Extra-EU countries under the European Erasmus+ programme allow regularly enrolled students to carry out part of their studies at one of the partner universities or to undertake internships at companies, training and research centres and other organizations.

Similar international mobility opportunities are provided outside Europe, through agreements with a number of prestigious institutions.

Study and internships abroad

The eligibility criteria to study under the Erasmus+ program, the rules for participation and the criteria for students selection are described in a specific call dedicated to the Food Area. Erasmus+ provides mobility opportunities within 40 academic partners, widely distributed in Europe and selected on the basis of their excellence and teaching affinity with the Italian degree. Students can apply to take courses in the area of nutrition and to carry out experimental work for the thesis in the following thematic areas: applied nutrition, assessment of nutritional status, nutritional characterization of food products and study of their in vitro and in vivo effects, the role of diet on the microbiota, food production technologies and food microbiology. The outline of the Erasmus+ study program (learning agreement) is prepared by the student in collaboration with the Italian academic Erasmus+ tutor. This document is defined after consulting the teaching board of the Italian degree and receiving the official approval of the activities to be performed in the host institution. In case of research activities, a detailed program describing the activities and the duration of the internship must be planned and formally approved by the host institution supervisor and by a member of the Italian teaching board (Italian supervisor). At the end of study period abroad, the Erasmus+ activities (credits and grades) must be certified in a document called transcripts of records that must be approved by the Italian teaching board. Exam grades are converted according to a pre-defined scale. The MSc degree in Human Nutrition and Food Science is part of the international program Erasmus+ Placement which is finalized to fund mobility of students, to carry out research activities aimed at the preparation of their final thesis in highly qualified host institutions (private and public universities and research centers).

How to participate in Erasmus mobility programs

How to participate in Erasmus+ mobility programmes

The students of the University of Milan can participate in mobility programmes, through a public selection procedure.
Ad hoc commissions will evaluate:

- Academic career
- the candidate's proposed study programme abroad
- his/her foreign language proficiency
- the reasons behind his/her application

Call for applications and informative meetings

The public selection generally begins around February each year with the publication of a call for applications specifying the destinations, with the respective programme duration (from 2/3 to 12 months), requirements and online application deadline.

Every year, before the deadline for the call, the University organizes informative meetings to illustrate opportunities and rules for participation to students.

Erasmus+ scholarship

The European Union grants the winners of the Erasmus+ programme selection a scholarship to contribute to their mobility costs, which is supplemented by the University funding for disadvantaged students.

Language courses

Students who pass the selections for mobility programmes can benefit from intensive foreign language courses offered each

year by the University.

Learn more at https://www.unimi.it/en/international/study-abroad/studying-abroad-erasmus

For assistance, please contact:
International Mobility Office
Via Santa Sofia 9 (second floor)
Tel. 02 503 13501-12589-13495-13502
Contacts: InformaStudenti mobility.out@unimi.it
Student Desk booking through InformaStudenti

1st COURSE YEAR Core/compulsory courses/activities common			
Learning activity		**Ects**	**Sector**
Applied nutrition		6	MED/49
Biochemistry of food, nutrition, and metabolic diseases		9	BIO/10
Economics and psychology of food consumptions		11	(5) M-PSI/01, (6) AGR/01
English proficiency B2 (3 ECTS)		3	ND
Food preservation and processing		8	AGR/15
Human physiology		6	BIO/09
Microbial quality and safety in food and ecology of human microbiota		8	AGR/16
Structure and function of organic molecules in food		6	CHIM/08
	Total compulsory credits	57	
2nd COURSE YEAR Core/compulsory courses/activities common			
Learning activity		**Ects**	**Sector**
Evaluation of nutritional status and principles of dietetics and diet therapy		10	BIO/09
Nutrition for health promotion		6	MED/49
Nutritional Epidemiology and Biostatistics		6	MED/01
Nutrition-related diseases		11	(5) MED/13, (6) MED/04
	Total compulsory credits	33	
Further elective courses			
Feeding throughout pediatric age		4	MED/38
Food choices and preferences of consumers (Consumer Science)		4	AGR/15
Molecular bases of taste		4	CHIM/06
Nutraceuticals and drugs in cardiovascular prevention		4	BIO/14
Probiotic science and applications		4	AGR/16
End of course requirements			
Final exam		22	NA
	Total compulsory credits	22	