

UPO UNIVERSITÀ DEL PIEMONTE ORIENTALE

● VERBANIA

● BIELLA

● NOVARA

● **VERCELLI**

● TORINO

● ASTI

● ALESSANDRIA

● ALBA

● FOSSANO

MASTER'S DEGREE (MSC)

FOOD, HEALTH AND

ENVIRONMENT

(FH&E)

FOOD, HEALTH AND ENVIRONMENT (FH&E)

MASTER'S DEGREE (MSc)

The MSc provides graduates with a deep holistic expertise in “biology and nutritional sciences”, fitting with the related biochemical and biomedical sectors.

Classes will provide knowledge about properties of nutrient and non-nutrients components of food, modifications that can originate during technological food processing, particularly focusing on the biochemical and metabolic physiological processes involved in nutrient digestion and intestinal absorption. Effects of nutrition will be dissected at the physiological, molecular, cellular and, eventually, pathological levels, also considering the impact of environmental contaminants. Risk assessment principles and food toxicology will be also considered. Indeed, the MSc will train about the main diet-related diseases derived from unbalanced diet, debating the adverse reaction of food (e.g. food allergy) and the physiological bioactive effects of food components.

Knowledge will also be provided on environmental effects on food quality derived from biotic and abiotic contaminants, as well as on plant biotechnology advances. Moreover, training will also include an overview on the European Union legislation about food, and food-related technology transfer as well as marketing and basic knowledge about psychiatry and anthropology topics, providing important decision-making and communication skills in working life.

During the MSc, stages abroad will be allowed through the Erasmus+ Program.

The MSc in FH&E is obtained after having acquired 120 ECTS including the final exam, in two years of attendance, and it is held in **Vercelli**.

The student should attend at least 50% the frontal teaching activities and at least 75% the educational laboratory activities.





Foto Salvatore Panarello

TEACHING PLAN

FIRST YEAR

TEACHING	MODULE	ECTS
Pathophysiology and immunobiology: from environment to nutrition	Pathophysiology	5
	Immunobiology	3
Biochemical and clinical nutrition	Biochemistry	5
	Nutrition	5
Ecology and toxicology	Ecology	5
	Toxicology	5
Plant biotechnology	Plant Biochemistry	1
	Botany	2
	Plant genetics	3
Food law and Business	EU Food Law	5
	Financial statement and performance measurements	4
Eating disorders from a clinical and sociological point of view	Eating disorders: biology, psychopathology and clinical aspects	2
	Social factors, lifestyles and nutrition	2
	Anthropology	3
Free choice ECTS from UPO		6
Further activities		3
TOTAL 1ST Year		59

SECOND YEAR

TEACHING	MODULE	ECTS
Food chemistry, basic principles of food technology and biotechnology	Food chemistry	4
	Basic Principles of Food Technology	2
	Basic Principles of Chemistry, Biotechnology and Industrial Microbiology	2
Microbiology	General microbiology	5
	Medical microbiology in nutrition	5
Impact of diet on human health	Endocrine and Metabolic diseases	2
	Nutrition in internal medicine: implications for health and disease	2
	Promotion of healthy diet and disease prevention	2
	Introduction to statistical and epidemiological methods	2
Bioinformatics, Genomics and Genetics applied to Environment and Food interaction with human Health	Applied bioinformatics	5
	Functional Genomics and Epigenomics	5
	Human and Medical Genetics	2
Free choice ECTS from UPO		3
Thesis		20
TOTAL 2ND Year		61

ADMISSION

Graduates from Class L-13 Biological Sciences, Class 12 or Class L-2 Biotechnologies are admitted. Graduates from other degree classes (or those that have obtained their degree abroad) may also be admitted if they acquired 40 CFUs in biological disciplines and 20 CFUs in non-biological disciplines. The English level of proficiency must be at least B2, or equivalent.

JOB OPPORTUNITIES

- ▶ Analytical (biological, microbiological, clinical-chemistry) and quality control of biological products in public and private food sectors;
- ▶ Nutritionist in the public and private health sector, collaborating with medical doctors;
- ▶ Consultant and freelance in the “food and nutrition” sector;
- ▶ Scientist in food-related topics in small, medium, large enterprises, as well as in public and private research centres;
- ▶ Food-related communication and scientific dissemination in dedicated scientific journals;
- ▶ FH&E graduates can access Section A of the Professional Register of Senior Biologists after passing a specific examination.



TUTTA LA NOSTRA OFFERTA FORMATIVA

ALESSANDRIA

LAUREE TRIENNALI

Chimica
Economia aziendale
Educazione professionale
Fisioterapia
Infermieristica
Informatica
Scienze biologiche
Scienze politiche e dell'amministrazione

LAUREE MAGISTRALI A CICLO UNICO

Giurisprudenza
Medicina e chirurgia

LAUREE MAGISTRALI

Biologia
Economia e Management
Intelligenza artificiale e innovazione digitale
Scienze chimiche

ASTI

LAUREE TRIENNALI

Servizio sociale

NOVARA

LAUREE TRIENNALI

Biotechnologie
Economia aziendale
Fisioterapia (anche ad Alessandria e Fossano)
Igiene dentale
Infermieristica (anche ad Alba, Alessandria, Biella, Verbania e Vercelli)
Promozione e gestione del turismo
Tecniche di laboratorio biomedico
Tecniche di radiologia medica per immagini e radioterapia

LAUREE MAGISTRALI A CICLO UNICO

Chimica e tecnologia farmaceutiche
Farmacia
Giurisprudenza (per l'economia e l'impresa)
Medicina e chirurgia

LAUREE MAGISTRALI

Amministrazione, professione e persone
Biotechnologie farmaceutiche
Management e finanza
Medical Biotechnologies (100% in Inglese)
Scienze infermieristiche e ostetriche

VERCELLI

LAUREE TRIENNALI

Chimica verde
Filosofia e comunicazione
Fisica applicata
Gestione ambientale e sviluppo sostenibile
Infermieristica
Informatica
Lettere
Lingue straniere moderne
Scienze biologiche

LAUREE MAGISTRALI

Biologia
Disaster and Health Crisis Management (100% in Inglese)
Filologia moderna, classica e comparata
Filosofia, politica e studi culturali
Food Health and Environment (100% in Inglese)
Intelligenza artificiale e innovazione digitale
Lingue, culture, turismo



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COME CISI IMMATRICOLA?

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