



Higher education and training in Nutrition-related fields in Italy and Europe

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Health claim
made on
Children??!!



The science of nutrition attempts to understand how and why specific dietary aspects influence health by explaining metabolic and physiological responses of the body to food, food components and diets.

With advances in molecular biology, biochemistry, and genetics, nutrition science is additionally developing into the study of metabolism, which seeks to disconnect diet and health through the lens of biochemical processes

Research in Human Nutrition has reached a high standard of quality and can be regarded as a autonomous area in the field of health and life sciences ..



Nutrition is a multidisciplinary area of science whose peculiarities are increasingly acknowledged in both the job market and the higher education system

The Higher education system in the field of Human Nutrition



Like other emerging fields of science, it covers multiple domains in the areas of health and life sciences, therefore requiring substantially different training skills, depending on the professional objectives. .





How many disciplines may human nutrition include?

Basic disciplines

Health disciplines



Human Nutrition education at European level

FENS Report

Annals of
**Nutrition &
Metabolism**

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Nutrition, Dietetics and Food Sciences Degrees across Europe

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Human Nutrition at European level

Wide differences in curricula, training, title recognition, LLL (life-long learning).

The Bologna Process aims to **create a European Higher Education Area by 2010**, in which students can choose from a wide and transparent range of high quality courses and benefit from smooth recognition procedures.



Human Nutrition at European level

The three priorities of the Bologna process are:
Introduction of the three cycle system (bachelor/master/doctorate),
quality assurance and
recognition of qualifications and periods of study

The Italian Higher education system

Lauree tecnico/scientifiche

Lauree sanitarie a ciclo unico

I Liv.
(Ms.)

II Liv.
(Ms.)

Laurea (Bachelor)

Laurea
Magistrale
(Master)

Dottorato di Ricerca
(Ph.D.)

Laurea sanitaria
(Bachelor)

Scuola di specializzazione (D.Spec.)

Laurea in Medicina e Chirurgia (M.D.)

Scuola di specializzazione (D.Spec.)

Laurea in Medicina Veterinaria (V.D.)

Dottorato di Ricerca
(Ph.D.)

Laurea in Farmacia (Pharmacist)

Scuola di specializzazione (D.Spec.)

0 1 2 3 4 5 6 7 8 9 10 11

Years after high school

UNIPR-EFSA Conference, 4 Oct 2007

The Italian Higher education system in the field of Human Nutrition

Lauree tecnico/scientifiche

Lauree sanitarie a ciclo unico

Il Liv.
(Ms.)

Food Science &
Techn., Biology
(Bachelor)

Nutrition
Sciences
(Master)

Dottorato di Ricerca
(Ph.D.)

Scuola di specializzazione Scienze
dell'Alimentazione – Applied Nutrition
(D.Spec.)

Dietician (Bachelor)

Scuola di specializzazione Scienze
dell'Alimentazione – Clinical Nutrition
(D.Spec.)

Laurea in Medicina e Chirurgia (M.D.)

Laurea in Medicina Veterinaria (V.D.)

Laurea in Farmacia (Pharmacist)

Scuola di specializzazione Scienze
dell'Alimentazione – Applied Nutrition
(D.Spec.)

0 1 2 3 4 5 6 7 8 9 10 11

Years after high school

UNIPR-EFSA Conference, 4 Oct 2007

Lauree tecnico/scientifiche

Lauree sanitarie a ciclo unico

7 courses offered by 7/86 universities. Offered since 2003. Enrolls about 100 (total). No courses opened to definition of VD and food scientists. Virtually no students. (national register)

II Liv. (Ms.)

Dottorato di Ricerca (Ph.D.)

The Italian Higher education system in the field of Human Nutrition

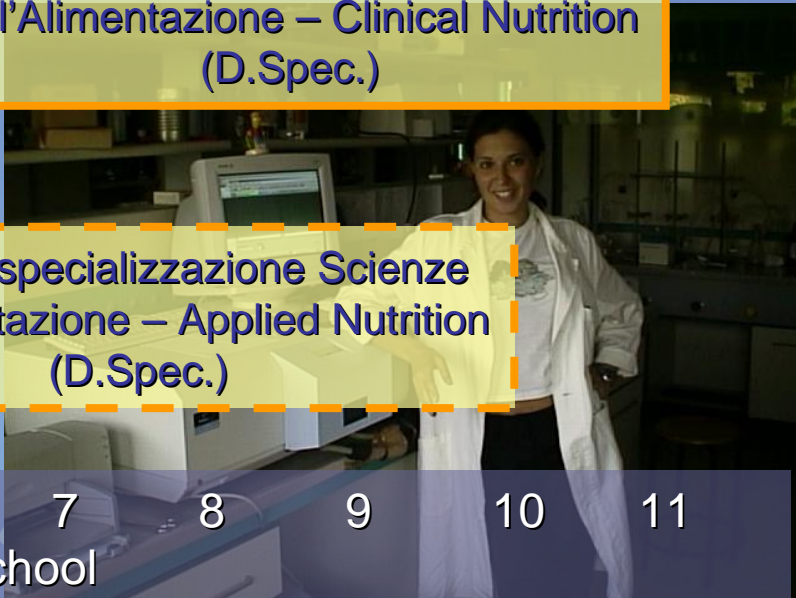
Scuola di specializzazione Scienze dell'Alimentazione – Applied Nutrition (D.Spec.)

Dietician (Bachelor)

11/20 courses offered by 39 medical schools. Limited to <15 (total) students per year. 20 courses offered by 39 medical schools. Limited to <480 (total) students per year. Technical Health Degree. Habilitation to the profession of Dietician. National Register.

Scuola di specializzazione Scienze dell'Alimentazione – Clinical Nutrition (D.Spec.)

Scuola di specializzazione Scienze dell'Alimentazione – Applied Nutrition (D.Spec.)



0 1 2 3 4 5 6 7 8 9 10 11

Number of professional figures / Italian population*:

35.000 dieticians (i.e. about 1 / 1.700)

3.500 nutritionists (i.e. about 1 / 17.000)

350 physicians (i.e. about 1 / 170.000)

**(given that all students enrolled conclude the study program and get a degree; that all degree holders find a job in their field of studies, that all professionals keep working over a time span of 35 y)*





Lauree tecnico/scientifiche

Lauree sanitarie a ciclo unico

One-year course on
“Strategies for
promotion of nutritional
quality and safety in the
developmental age”
(Dep. of pediatrics)

II Liv.
(Ms.)

Human Nutrition at Parma University

Dottorato di Ricerca
(Ph.D.)

Scuola di specializzazione Scienze
dell’Alimentazione – Applied Nutrition
(D.Spec.)

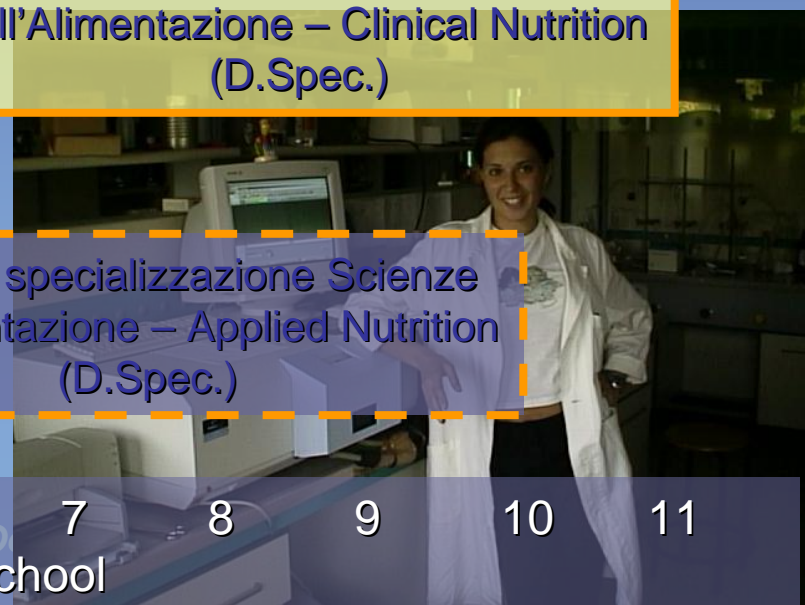
Dietician (Bachelor)

Doctorate in Food
Sciences and
Technologies (6-7
students/year). About 1
student/year on nutrition

Scuola di specializzazione Scienze
dell’Alimentazione – Clinical Nutrition
(D.Spec.)

Activated A.A. 2005/2006.
One (1) student per year

Scuola di specializzazione Scienze
dell’Alimentazione – Applied Nutrition
(D.Spec.)



0 1 2 3 4 5 6 7 8 9 10 11

Years after high school



•Netherlands:

Population - 2007 estimate
16,570,613

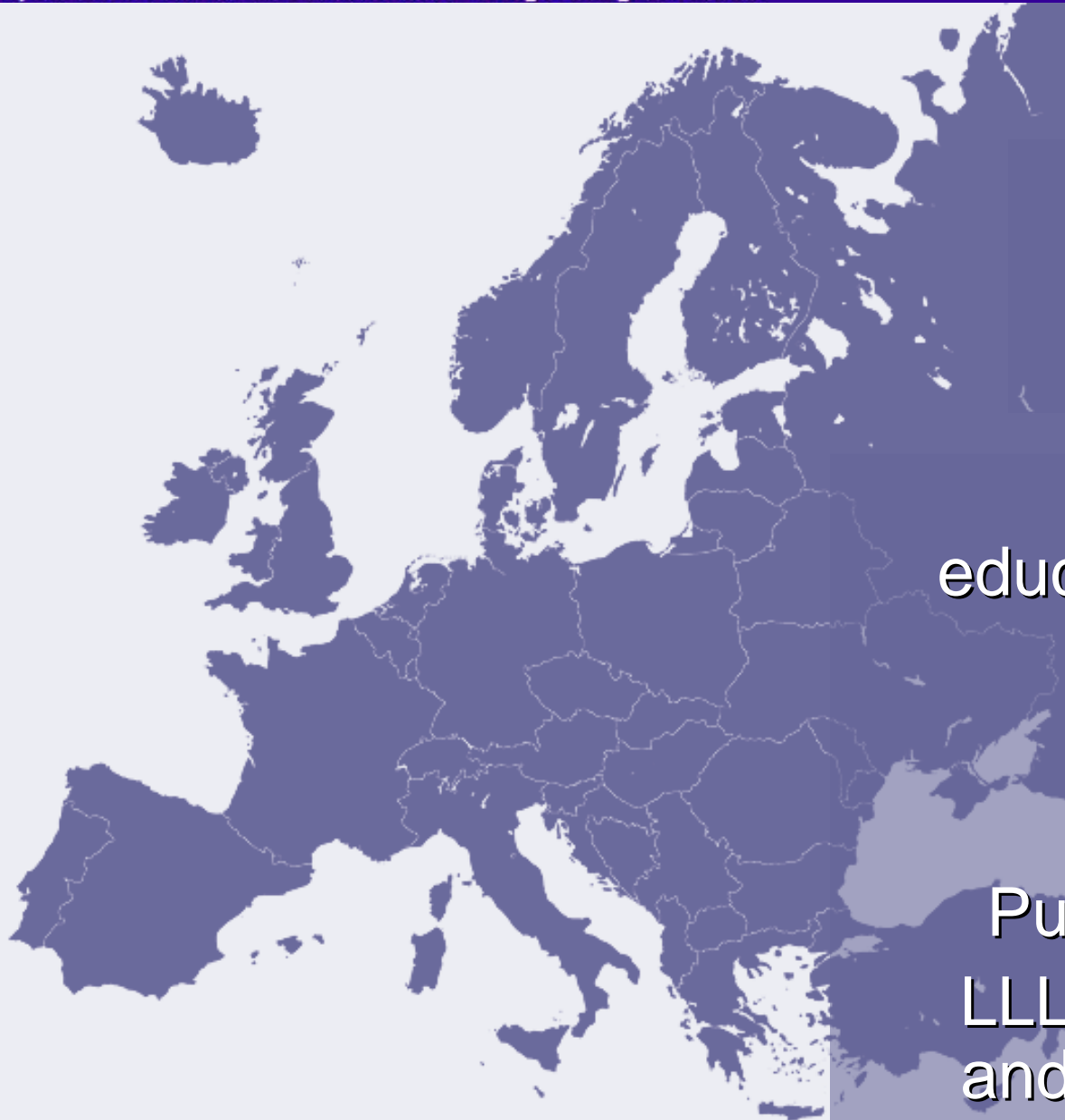
•Wageningen:

The city incorporates **34,348** inhabitants (as of January 1, 2006), of which many thousands are students.

•Wageningen University:

The university and associated research institutes employ about **7400** people. It is considered the largest food & nutrition R&D cluster in the world.

[illegible]



Human Nutrition integration at European level

Efforts in integrating
education and training in
the fields of:

- Dietetics,
- Food Sciences,
- Public Health Nutrition,
- LLL (life Long Learning)
and certification of skills



DIETS <http://www.thematicnetworkdietetics.eu>

DIETS (Dietitians Improving the Education and Training Standards) was established in 2006 with the University of Plymouth as the coordinating institution, and continues to develop partnership activities among European Dietetic Associations through a Thematic Network with already 100 A Socrates Thematic Network Partners from 30 European countries

Human Nutrition integration at European level

A Socrates Thematic Network
Two main objectives:

- 1) To describe all areas of dietetic practice, education and training throughout Europe and develop the utilization of ECTS (European Credit Transfer and Accumulation System)
- 2) To develop quality indicators, in particular in practice education .



ISEKI <http://www.iseki-food.net/>

ISEKI-Food Association is an independent European non-profit organization, established in 2005 by more than 50 participants (University institutions, research institutes, companies and associations related to food) from 24 countries of the Thematic network ISEKI-1 and ISEKI-2.

Human Nutrition integration at European level

A Socrates Thematic Network

Two main objectives:

- 1) Improve the harmonisation of the studies in Food Science and Engineering in Europe.
- 2) Develop and adapt the curricula, with the objective of including safety and environmental topics.



JOBNUT- strategies for improved vocational training in Public Health Nutrition (PHN).



PREVNUT <http://www.prevnut.ki.se>

extensive networking between universities and larger organizations. Coordinated by Karolinska Institute, was running courses in Eastern Europe in collaboration with the WHO in the early 90's. In 1997, the EC funds a larger collaboration between 21 Universities to set up a joint European master programme in PHN. (Jobnut)

Human Nutrition integration at European level

JOBNUT objectives:
improvement of education and training systems of PHN throughout the EU, reinforcing partnership, exchange of best practice and the promotion of a quality assured registration system for PH nutritionists.

ENLP <http://www.enlp.eu.com>

Non profit initiative. Since 1994 it organizes intensive courses based on a varied and highly interactive programme, which includes role-playing, presentations, discussion groups and talks by leading European nutritionists. Participants are selected each year from final year PhD students, postdoctoral fellows, the food industry or government (age 35 or younger).

To assist the development of future leaders in the field of human nutrition in Europe.
To build a network of competences which can help to create a common European vision and approach in nutrition and health and food safety.

Human Nutrition integration at European level

ENLP objectives:

NuGo <http://www.nugo.org>

NuGO is a European-funded Network of Excellence, the full title of which is 'The European Nutrigenomics Organisation: linking genomics, nutrition and health research'.

Partners are research organizations, Universities and small-medium sized businesses from ten European countries

Human Nutrition integration at European level

NuGo training objectives:
aim of the NoE is to train European scientists to use post-genomic technologies in nutrition research. The objective of the training programme is to promote knowledge and the development of skills in nutrigenomics science throughout Europe.

(British) Nutrition Society

<http://www.nutrition society.org>

The **Nutrition Society** holds voluntary registers and is working towards the protection of the title 'nutritionist' in order to protect the public and improve professional standards. It also promote a **Code of Ethics and Statement of Professional Conduct** and Policy on Professions in the Nutritional Sciences.

NS aims to promote high standards of **professional education** through a **Course Accreditation Scheme**.

From 2005, course accreditation scheme include two types of specialist courses based on the biosciences: • Public Health Nutrition • Nutrition.

**Human Nutrition
integration at
European level**

NS training objectives:

NS aims to promote high standards of
professional education through a **Course
Accreditation Scheme**.

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include two types of specialist courses based
on the biosciences: • Public Health Nutrition •
Nutrition.



FINAL REMARKS (WITH A SPECIAL LOOK AT PARMA):

GOVERNANCE:

- Convergence happens
- Train is already rolling: In or Out
- Need for strategies
- Need for integration (local, regional, national, international level)
- Exploiting opportunities for education linked to EFSA experts' presence in town

STUDENTS:

- Italian children are Europe's fattest; somebody will soon reorder national priorities
- Start thinking "from fork to farm" instead that "from pork to ham"
- In the meantime, get international



THANK YOU