

FENS REPORT

NUTRITION, DIETETICS AND FOOD SCIENCES DEGREES ACROSS EUROPE

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Background

Nutrition and food quality are factors contributing to health maintenance and promotion as well as for therapeutical purposes. From a few decades ago, this assertion has become more important not only for the scientific community, but also among consumers, who demand healthy, safe and nutritious foods, even with additional beneficial properties beyond the nutritional value.

Latest advances in this multidisciplinary field concerning foods and nutrition are forcing European policy-makers and academic boards to adapt and update the current teaching programmes concerning nutrition- and food-related sciences in order to be prepared to fit into the European Space for Higher Education system. This situation provides a unique opportunity for a renewed analysis in order to achieve an agreement for a regulated education in this area, that currently involve general practitioners, physicians, paediatricians, pharmacists, nurses, food scientists, chemical engineers and, of course, dieticians and nutritionists. For all these reasons, policy-makers, officers and civil servants from all European countries together with higher education institutions, academic authorities, scientific societies and professional organizations should make a great effort of integration and collaboration.

In this context, the nutrition and dietetics practice across Europe as well as food sciences implementation are, nowadays, diverse and have evolved to meet the needs of the users, patients and consumer demands within each country. The qualification is nationally regulated in some European countries, but often it is not comparable across Europe. The titles are only differentiated in a minority of countries. Comparable qualifications within the EU would then support the European labour market, enabling nutritionists, dieticians and other food, health or social professionals to study and work more easily and comfortably throughout the European Union in Food and Nutrition issues.

Within Europe, nutritionists, dieticians and food scientists find themselves practising in the following main areas: administrative, clinical, public health or community, marketing and research. Administrative positions are those focused primarily within food service management with responsibility for providing nutritionally adequate, quality food to individuals or groups of healthy or diseased, living in an institution or a community setting. Clinical professionals are those who have duties for planning, education, supervision and evaluation of a clinically devised eating plan to restore the patient to functional nutritional health, who can work in primary care as well as health institutions. Public health or community nutritionists/dieticians and food-related professionals are directly involved in health promotion and policy formulation that leads to the promotion of healthy food choices amongst individuals and groups to improve or maintain their nutritional health and minimizes risk from nutritionally derived origin. Marketing nutritionists/dieticians as well as food professionals advice about innovation and new products, close to social marketing concerning food issues. Finally, a researcher

in the area of nutrition and food is able to join in a multidisciplinary team of research to develop original studies about new products and nutrition and health-interactive issues.

Nutritionists and food-related professionals, regardless of their background, must be able to interpret and communicate nutritional knowledge to groups and individuals. Degree holders in these areas must be able to elicit information on nutritional requirements and research from the various disciplines in order to produce practical advice on food intake and associated counselling resources. These professionals are required to work on a multidisciplinary team within the complex frameworks of ethical and legal boundaries at workplace (i.e. health services, private practice, food companies and manufacturers, industry, local government, education or research). In some European countries, the practice of dietetics is restricted to dietitians who have been overseen by a regulatory body. There are two pre-registration routes concerning dietetics professional development that take place in higher education. A first university cycle qualification is the most popular route to gain a qualification and registration in dietetics. However, it is possible for individuals with a Bachelor's degree in an appropriate subject (normally in human sciences) to undertake a second programme suitably constructed and delivered to achieve a dietetics qualification and registration. A number of Master's degrees and postgraduate courses are being developed to fulfil these criteria at European level, although a regulated implementation is required under the Bologna Declaration concerning university higher education in Europe.

Training and competences

Nutrition and food sciences are closely related with health and have autonomous capacity as multidisciplinary sciences. Education programmes must promote an integrative approach concerning the application of theory into practice. Therefore, nutrition and food sciences studies and degrees must be designed to provide learning opportunities that facilitate the acquisition of professional capabilities in addition to a solid academic background.

The practical part of the education programmes is an essential element of any qualification leading to qualification in nutrition, dietetics or food sciences. In some countries the practice of dietetics is restricted to dietitians who have undergone a recognised education and training. The practical programme includes skills to demonstrate capabilities in the academic components and at workplace or practical component. This practical component must allow demonstration of the application of theory in the practical setting.

A theoretical programme in nutrition, dietetics and food-related sciences require formation and training on the following areas:

- *Basic Sciences*: physics, chemistry, biochemistry, biology, genetic, anatomy, histology, physiology, mathematics, statistics, research methods and computers skills

- *Food and nutrition sciences*: food science, nutrition, dietetics, clinical medicine, pharmacology, microbiology, immunology, food skills, sensory evaluation, nutritional assessment, food safety and food hygiene
- *Food service administration*: management and leadership, administration, healthcare organisation, food planning and production, catering and food service, legislation, economics, equipment, purchasing, marketing and community services.
- *Nutrition education and community nutrition*: public health, health promotion, ethics, sociology and social policy, psychology, enquiry, teaching methods, education and communication, food culture and epidemiology.

Professionals with nutritional or food sciences-related backgrounds must be ready to work in a multidisciplinary team in the benefit of the society, including all aspects of the food chain according to the consumer/patient demands. Therefore, physicians, paediatricians, pharmacists, nurses, social workers, chemical engineers and so on, in addition to nutritionist, should be integrated for a focused action with a perspective of sharing knowledge and skills of highest standards in the future.

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Table 1. Current Situation in Europe (2007)

Country	Nº Univ NHD/ CTA	Model / years		Access to PhD NHD/CTA	Title (NHD) in mother tongue	National Registration NHD
		NHD	CTA			
Austria	6/1	Dipl./5 BSc/3 MSc/2	BSc/3 MSc/2	Yes/	Mag. rer. nat. Ernährungswissenschaften (MSc Nutritional Sciences) BSc Ernährungswissenschaften MSc Natural Sciences (Nutritional Sciences) mit Spezialisierung in Molekulare Ernährung, Food Quality and Food Safety, Ernährungsepidemiologie, Public Health Nutrition BSc Lebensmittel- und Biotechnologie (Agricultural University) MSc Lebensmittelwissenschaften und -technologie (Agricultural University) MSc Safety in the Food Chain (Agricultural University) BSc Dietetics	Yes
Belgium	2/3	Non-BSc/3 BSc/3	BSc/3 Post/2		BSc diététique	No
Denmark	3/1	BSc/3,5	BSc/3 MSc/2	Yes/	BSc Nutrition and Health	Yes (clinic)
Finland	1/1	MSc/5	BSc/3-4 MSc/1,5	Yes/	MSc Health Sciences	Yes
France	26/36	Non-BSc/2	3-5		DUT Genie Biologique-option diététique BTS en diététique	Yes
Germany	16/0	Dipl./3,5-4,5 BSc 3-3,5 MSc 1,5-2	Yes No* Yes		Diplom-Oecotrophologe Diplom-Ernährungswissenschaftler Diplom-Oecotrophologe (FH) BSc Oecotrophologie BSc Ökotrophologie BSc Ernährungswissenschaft BSc Ernährung und Lebensmittel MSc Ökotrophologie MSc Ernährungswissenschaft MSc Ernährungswissenschaften MSc Food Science Diplom-Ingenieur Ernährung und Versorgungsmanagement (FH) Diätassistent (Non-BSc)	
Netherlands	3/1	BSc/4 MSc _?	BSc/3	Yes/	BSc dietist BSc voedingskundige BSc/MSc Human Nutrition and Dietetics	Yes
Ireland	2/4	HD/2 BSc/3-4 MSc/1-2	BSc/4 Post/2	YES/NO	BSc (Hons) Human Nutrition and Dietetics	Yes
Italy	0/8	C/3 Laurea/3	BSc/2-5 Post/2		Laurea in Dietistica	Yes
Norway	0/1	-	BSc/3 MSc/2		-	-
Poland	5	-	BSc/3-4 MSc/1,5		Inżynier or Magister technologii żywności i żywienia	-
Portugal	0/6	BSc/4 Lic/4-5	Lic.2-5 BSc/4 Post/2	Yes/	Licenciado en Ciências da Nutrição/Dietética	No
Romania	0/1	-	HD/5		-	-
Slovaquia	0/1	-	BSc/3 MSc/2		-	-
Slovenia	0/1	-	HD/4,5		-	-
Spain	17/22	Diplom/3	Lic/5	No/Yes	Dietista-Nutricionista/ Tecnólogo de Alimentos	No
Sweden	4/3	BSc/4	BSc/3 MSc/1	Yes/-	BSc and MSc Dietetics BSc and MSc Nutrition BSc Food Sciences	Yes
Switzerland	3/1	Dipl/3	MSc degree/5	No / Yes	Dipl. Ernährungsberater(in) or Diététicien(ne) diplômé(e)	Yes
The Czech Republic	0/1	-	BSc/3 MSc/3		-	-
U.K	13/6	BSc/3-4 MSc/2-3	BSc/3-4	YES/NO	BSc (Hons) Human Nutrition and Dietetics	Yes

* possible in some cases (assessment of aptitude required)

NHD: Human Nutrition and Dietetics; BSc: Bachelor; CTA: Food Sciences Degrees; MSc: Master; HD: Higher Diploma; POST: Postgraduate; Dipl: Diploma; C: Course; Non-BSc: Non Bachelor.