

A European Master's Programme in Public Health Nutrition

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On behalf of the Working Group

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Executive Summary

Public Health Nutrition is the promotion of good health through nutrition and physical activity, and the prevention of related illness in the population.

The task of developing and undertaking effective population-based strategies over Europe demands people that are trained and competent with comparable skills. To achieve this, proper training across Europe is required. With the aid of funding from Directorate General SANCO of the European Commission, the Karolinska Institutet, Stockholm, was asked in 1997 to act as their representative in the setting up of a pan-European Master's programme in Public Health Nutrition, a project involving a total of 17 European countries. It was introduced with the aim to increase the European dimension, improving the quality of existing training programmes in Public Health, and introducing a new and critically important area of specialisation within public health.

The development of the programme is now at the end of its fifth year. Much progress has been achieved in defining, setting up, facilitating and ensuring that the programme objectives and structure meet the training needs that graduates will require for working in Public Health Nutrition on a European level. Quality assurance remains the other critical cornerstone of our work and considerable time has been spent working on this issue, introducing an element of team teaching and distance learning to the programme, supported by Socrates teacher exchange and IP agreements.

The developments within the *EURODIET* project, the *French Initiative* and the *EU Health Monitoring Programme*, have been continuously integrated into the programme, which has been broadened, covering more courses and more universities in EU member states as well as those from the applicant countries. We have produced a general leaflet, a course catalogue, a newsletter, an email list for students and a discussion list at the website for the Master's Programme, www.prevnut.ki.se

The work with the European Master Programme for Public Health Nutrition has reached a level where an increasing number of students are taking part in parts of the programme or have followed the whole programme. A network of knowledgeable students is building up over Europe, leading to cross-cultural and cross-language collaboration in a collegial manner. Teacher exchange is established and will be continuing, due to a mutual and genuine interest in European Public Health Nutrition.

The support from the Commission has led to so much more, above and beyond the European Master Programme. The teaching collaboration will keep the topic on our agendas and we hope that the programme can achieve a permanent status within the new Public Health Programme, thereby avoiding gaps in funding and providing a solid backing to an already rewarding collaboration.

On behalf of the Working Group, Agneta Yngve (Programme Co-ordinator) and Åsa Strindlund (International Liaison Officer),

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Programme Secretary

Background

With funding from Directorate General SANCO of the European Commission, the Karolinska Institutet has been asked to act as their representative in the setting up of a pan-European Master's programme in Public Health Nutrition. This project involves partners from 14 member states as well as Iceland, Norway and Slovenia (Appendix I). The project is now at the end of its fifth year.

Public Health Nutrition is '*the promotion of good health through nutrition and physical activity and the prevention of related illness in the population.*' For the majority of European adults, who neither smoke nor drink excessively, the most significant controllable risk factors affecting their long term health are what they eat, and how physically active they are.

The main aim of this project has been the setting up of a pan European Masters programme in Public Health Nutrition. The project is a step towards achieving the long-term goal of improving Public Health in Europe. The task of undertaking effective population-based strategies in the field of Public Health Nutrition requires people that are trained and competent, with comparable skills. This can only be effectively achieved through proper training across Europe. For this purpose, common standards for training and a quality assurance programme must be set and maintained. Representatives from 17 centres of excellence in this area from all EU member states, excl Luxembourg, and EFTA countries (Norway, Iceland and Switzerland) were invited to join the project, named as The Working Group (Appendix I).

First and Second Year

In order to deliver the skills necessary for graduates to work in Public Health Nutrition at a European level, core modules were initially identified and defined. These modules are:

- Principles of Nutritional Science (15 ECTS) ,
- Principles of Public Health (10 ECTS)
- Principles of Health Promotion (10 ECTS)
- Principles of Physical Activity (5 ECTS)
- Assessment of Nutrition and Physical Activity (10 ECTS)
- Epidemiology and Biostatistics (10 ECTS)
- Food Habits: An Integrated Perspective (5 ECTS)
- Food and Nutrition Policy (5 ECTS)
- EU Basics in Public Health Nutrition (5 ECTS)
- Food Safety (5 ECTS)
- Elective modules (5 ECTS)
- Research and Dissertation (30 ECTS)

ECTS is the European Credit Transfer System; 1.5ECTS is equivalent to approximately one week of full time study.

A full report was submitted to DG V/F/3 (now DG SANCO) in September 1999. The project report covered the period September 1998 until September 1999. It included the background to the project, its aims and objectives, outcomes, conclusions and future work. The main outcomes were:

- A 'Declaration of Interest' had been signed by the heads of departments of all participating centres in order to develop the unity and to show their continued commitment towards the development of the Master's programme across Europe
- The European Network for Public Health Nutrition, that was initiated during the first phase of the project, had been further developed
- The core curriculum had been updated to ensure completeness
- A quality assurance committee had been established
- Marketing and promotion of the programme was being developed, including a web-based catalogue of applicable courses/modules
- Funding for both student and teacher mobility had being sought from DG XXII
- In the academic year 1999-2000, seven of the 'official' modules would be running in three different countries (Sweden, UK and Portugal) as pilot activities

The second year of the project was a consolidation period, particularly in light of the many landmarks achieved in the first year. It was necessary to ensure that the project had 'solid foundations' on which to build. Much time was spent on Socrates funding, quality assurance, development of the European Network for Public Health Nutrition (ENPHN) to aid with consortium and infrastructure building and further development of the core modules. Many lessons had been learnt which is an integral part of the development process (for example on mobility issues).

The fact that 30 students from 12 different countries attended the EU Basics in Public Health Nutrition module proved that this project was successful. This module was held in Luxembourg in conjunction with the Third European Summer School on Public Health and Health Promotion in Europe, between the 27th June and 3rd July 1999. It must not be forgotten that this was the first of any pan European modules to be held and although problems were encountered, feedback from students had been favourable, and the group as a whole should be proud of its achievements with the module.

To build on what had been achieved previously, a project proposal for a third year was submitted to DG SANCO in September 1999. It was approved, and covered the period January to December 2000. The aim was to continue the establishment of a pan-European Masters Program in Public Health Nutrition, leading on from phases one and two (1998 onwards).

The Third Year

The main outcomes of the third year, January to December 2000, are summarized in the following six paragraphs:

Continued development of the core modules and general course structure

The core modules and general course structure were further developed by appointed Core Course Contact Committees. These committees were made up of experts in the field, drawn from within the Working Group as well as externally, and their work had resulted in two Course Documents: one version for students and one longer version for lecturers and administrators. Furthermore, the localisation and scheduling of core modules had been established and a course catalogue had been developed that enabled potential students to easily gain information where and when modules will be held across Europe.

Each of the potential participating universities had conducted a 'self-study', clearly indicating how the EMPHN could be implemented within their own university structure. As a result of these 'self-studies', the Quality Assurance Committee (QAC) of the EMPHN had prepared one

summary document stating for example the universities where students can obtain an EMPHN, which universities were offering what modules included in the EMPHN, the number of students willing to do an EMPHN, and the number of students interested in attending modules abroad. In the European Masters in Public Health Nutrition Project (EMPHN), quality assurance mechanisms were under development that will support the flexibility essential for a Europe-wide consortium approach to the quality-assured teaching and learning in Public Health Nutrition.

Strengthening the European Network for Public Health Nutrition (ENPHN)

As part of the support structure for the EMPHN, much time and effort had been spent on creating a structure that will allow the programme to exist. A draft Mission Statement has been presented to the group as a continuation of the work initiated last year at the Working Group meeting in Las Palmas. It was generally felt that there was an important niche to be filled and that the efforts of The Working Group supported the development of the EMPHN. This recognition was regarded as an acceptance by the European Commission, that the ENPHN is an official EC network.

The success and the appreciation of the need for such a network can be exemplified by the French Presidency of the European Union advocating the promotion, use and support of networks such as the European Network for Public Health Nutrition.

In order to establish lines of dissemination throughout the network, a quarterly electronic newsletter was created.

Continued consortium and infrastructure development

We submitted a CDA (Curriculum Development) Advanced Level application as a method of gaining funding. However, the application was rejected. Instead, we applied for Erasmus funding. Bilateral agreements had been signed between the Karolinska Institutet and many of the partners, and also between many of the different partners. Money were sought for student and/or teacher exchange.

Furthermore, an application was submitted (and subsequently granted) for an 'Intensive Programme', aimed at developing a future course/module, namely the Summer School 'EU Basics in Public Health Nutrition'. Money was granted for travel and subsistence, for lecturers as well as students.

The Summer School took place between the 17th and 27th August 2000 in Bordeaux, France. The course was organised in collaboration between the Karolinska Institutet, Université Victor Segalen Bordeaux 2, and the European Commission, SANCO, G/3. Participants of the course were 55 students from 12 countries, including invited participants from another European Master's Programme, EUMAHP; European Master in Health Promotion. The course provided information on the organisation of the European Union, where matters related to public health nutrition are handled and how to participate in programmes within SANCO. The aims and objectives of the module were met through a careful blend of lecturing, interactive sessions and group work.

A great number of distinguished lecturers volunteered to participate. In addition to members of the Working Group, lecturers included representatives of the French Presidency, the European Commission, NGOs, WHO and FAO. France held the Presidency of the Commission at the time, having nutrition as its central theme. In keeping with this, it was suggested that the Summer School should be located in the country holding the Presidency of the Commission during that period. For example, it was the intention to have the Summer School in Sweden in 2001, as it held the Presidency during the first half of 2001.

A course report including student evaluation forms was widely disseminated, and contributed to making improvements in future courses.

Integration and co-ordination with other EC sponsored Master's programmes

Lines of communication and collaboration had been opened between the EMPHN and the coordinators of the other DG SANCO funded European Master's Programmes. Particularly, the European Master's Programme in Health Promotion (EUMAHP) at the University of Brighton, UK, had been dedicated considerable efforts.

A shining example of this co-operation was the Summer School mentioned above, which was attended also by a number of students and lecturers from the EUMAHP programme.

While the collaboration between the EMPHN and EUMAHP had been the most vociferous, communications continued with the European Masters Programmes in Public Health, Public Health for Nurses and Gerontology.

Integration of candidate countries into the programme

While it was our intention to integrate and involve the new potential members of the European Union, this was deemed inappropriate at this point in time. However, in the future it will be absolutely crucial to involve these countries in a fair and equitable way. Furthermore, there must be a clear and easily understandable policy as how to involve new countries, as well as new centres within existing member states.

Development of a seminar in conjunction with a major nutrition conference

An important part of the work within the programme at this time is the issue of dissemination.

As part of a major nutrition conference that was held in Bilbao, Spain in October 2000, the Network was invited to conduct a seminar on the programme. This type of dissemination is indicative of the processes occurring that enable diffusion of the programme. This may be further highlighted by the fact that journal articles have been published in several member states, including Germany, Sweden, Austria and the UK. Furthermore, we were asked to present our programme at one of the largest nutrition related conferences in the world, namely at the IUNS conference, in Austria, August 2001.

The Fourth and Fifth Year

Statement of project aims

The main aim was to continue the establishment of a European Master's Program in Public Health Nutrition, leading on from phases (September 1997-December 2000) (Annex II).

Specific aims were:

1. Continued development of the core modules and general course structure, including decentralisation of the overall co-ordination and organisational structure of the course
2. Further development of quality assurance schemes for the course
3. Increasing number of
 - a. modules to be held at participating universities,
 - b. universities participating in the programme, and
 - c. languages used
4. Intensified marketing and promotion, and funding for student and teacher transportation

5. Strengthening of the European Network for Public Health Nutrition, and continued consortium and infrastructure development, including
 - a. co-ordination with other Master's programmes with the Public Health Program,
 - b. integration of candidate countries into the programme
6. Establishment of a continuous series of seminars in conjunction with the EU Presidency and a seminar in conjunction with the World Nutrition Conference in Vienna 2001.

Achieving the aims for the project period

During 2001-2002, the project had a period of 14 months to try to achieve the aims stated above. The unsupported gap of 10 months of the year 2001 between funding periods was due to technical – administrative delays in the Commission. Nevertheless, 2001 was also an active year, due to the devoted commitment from participants and thanks to the parallel development of a monitoring programme. The monitoring programme was to a great extent involving the same participants as the ENPHN, which made it possible to carry out a meeting in Luxembourg in the autumn of 2001.

Regarding the aims mentioned above, the following has been achieved during 2001 and 2002:

1. The development of an annual course committee for the EU Basics course has led to the effective execution of the EU Basics Course in Public Health Nutrition in Valencia in July 2002, and also to the collaboration with the two other EU Public Health Master Programmes: *EUMAHP* and *Health and Ageing*. In the course committee last year, we had the pleasure to work with Prof Irja Haapala, University of Kuopio, Dr Carmen Perez Rodrigo, University of Navarra, Prof Lluís Serra Majem from University of Barcelona, Dr Concha Colomer from EVES in Valencia (*EUMAHP*) and René van Rijsselt (*Healthy Ageing*) (Appendix VI).

Regarding the decentralization, Joop Van Raaij at University of Wageningen took responsibility for the quality assurance, and with Irja Haapala at University of Kuopio to be responsible for development of distance learning programmes and marketing materials. These negotiations will lead to developments during 2003.

2. The core courses quality assurance has been discussed through the use of team teaching, for example in Stockholm during the module Health Promotion in Nutrition and Physical Activity, in Kuopio and Las Palmas during the module Principles of Nutritional Science, and in Valencia during the course EU Basics in Public Health Nutrition in 2001 and 2002. The increasing number of universities taking part in the teacher exchange is providing a good platform for team teaching. The universities are also encouraged to do follow-up self-studies, looking at the quality of separate modules as well as at the staff and equipment at the different universities over Europe.
3. The number of modules that have been run since the start have steadily increased, as has the number of universities taking active part in the EMPHN (V). The number of students participating in the courses at the different universities has also increased, as well as the number of languages in which the core courses are run.
4. The marketing of the courses has been intensified due to the development of a pamphlet as well as the continued work on the Euro Nut Net News. The pamphlet, 'Making way for a healthier Europe' (Appendix VII), presents course information for prospective students, and has been distributed to all partner institutions. The Euro Nut Net News is a Newsletter that is produced 3-4 times per year depending on news development (Appendix VIII).

Present as well as former students of the EMPHN have been provided both with the newsletter, an e-mail list and with a website for continuous discussions.

5. The bonds with the other two European Master Programmes have been further strengthened through collaboration in conjunction with the Summer School, which was held in Valencia in July 2002 – see point 1 above. The discussions have progressed with the Ministry of Health in Slovenia, in connection with a conference on public health nutrition in Slovenia in April 2002, where the programme was presented.
6. The seminar series started out in Vienna, during the World Symposium for Nutrition in August 2001. It was our intention to hold a similar seminar in Valencia, during the summer school 2002. However, due to the Spanish presidency's lack of interest in such an arrangement, this could not be pursued. We are now working towards a successful realisation of a seminar in Athens, in March (2003), in connection with the Greek presidency.

The Future

The justification and timing of the need for a European Master's Programme in Public Health Nutrition could not be more apparent than at a time when nutrition is very much on the political agenda with the French Presidency of the European Union. In their document entitled 'Health and Human Nutrition: Element for European Action', they included the following quote:

'Specific training programmes in Public Health Nutrition should be developed in parallel with the inclusion of public health nutrition elements into the various health professional training programmes. Harmonised or common core curricula for different levels and professions should be developed between member states. A lead had been given by the European Master's Programme in Public Health Nutrition which helps professionals to share Member State experience. Public health nutrition courses should be added to all health-training programmes. The profession of public health nutrition should be recognised in the Member States as such and quality assurance criteria developed. Recognition between Member States should be envisaged' (Société Française de Santé Publique 2000).

WHO and WHO/FAO have recently prepared reports ("Diet, Physical Activity and Health", and Diet, Nutrition and the Prevention of Chronic Diseases" respectively), which both emphasised the need for more and better promotion of health food habits and an active life-style. However, the task of developing and undertaking effective population-based strategies over Europe demands people that are trained and competent with comparable skills. To achieve this, proper training across Europe is required.

The task to set up a European Master's Programme in Public Health Nutrition is now proceeding rapidly. Much has been done to develop the programme both in terms of its content and quality, but also its support structure in the European Network for Public Health Nutrition. A great deal has also been done to enable students to travel between expert institutions. The ERASMUS programme is in that respect giving a lot of support to both student and teacher exchange. For example, Karolinska Institutet currently has bilateral agreements with 11 universities within the European Master Programme for both student and teacher exchange, and Kuopio University has agreements with Stockholm, Vienna and Southampton.

Major progress has also been made regarding development, dissemination and integration. We have during the year produced a nice pamphlet for the programme (Appendix VII), collected data

on which core modules are held where, how many students that have passed the different course modules in each country (Appendix V). We have created a Network Newsletter and a Web Forum for students; we have run so far four summer schools covering the core module “EU Basics in Public Health Nutrition” and are busy planning for a fifth one in Athens, in June 2003.

We are currently negotiating with the Nutrition Society, the German-speaking Nutrition Societies and the European Academy of Sciences and Arts about the possibilities for helping out with quality assurance of courses and individual students’ achievements and to hand out a European Certificate ensuring that the Master examination that the student has passed, with appropriate additions, covers what is needed for a European Master in Public Health Nutrition.

However, this does not mean that the process is completed. More work is needed to ensure that students have a cohesive programme that enables them to acquire the skills necessary to become Public Health Nutritionists on the European arena. Specific tasks have been identified for the future. Among them are are:

- Using EUMPHN students in European projects regarding research and training, in their work with the Master Thesis, which needs to have a European dimension.
- To ensure that more universities take active part in the exchange of students and staff. Within the above, to further increase the number of
 - Courses within the participating universities
 - Universities participating within each country, and
 - Countries participating, by including universities from candidate countries
- To further develop the course catalogue, student and teacher exchange, web interaction as well as the quality assurance programme and to particularly look into the issue of team teaching, that has already been used within the programme in order to further increase quality and comparability between countries
- To introduce an element of sustainability into the programme, by building permanent structures as well as supporting the formulation of national and European policy documents regarding training and employment within the specialised area of Public Health Nutrition. The Network has taken an active part in the lobbying for including education in the Programme for Community Action in the Field of Public Health, published in September 2002.

A last comment

The Unit for Preventive Nutrition at Novum, Karolinska Institutet, has had an interesting, stimulating, constructive and fruitful collaboration with the Commission for 4 to 5 years, which we greatly do appreciate. We have also worked together for a future development of this Masters Programme. Thus, we do hope that our collaboration will continue. The European Network for Public Health Nutrition represents a huge potential, which also should be considered.

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Appendix I

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Appendix II

Master's Programme in Public Health Nutrition;
Proposal for 2002



EUROPEAN COMMISSION
DIRECTORATE-GENERAL V
EMPLOYMENT, INDUSTRIAL RELATIONS AND SOCIAL AFFAIRS
Public Health and Safety at Work
V/F

CEC/LUX/V/F(95)

**PUBLIC HEALTH
APPLICATION FOR FUNDING**

EUROPEAN COMMISSION
PUBLIC HEALTH AND SAFETY AT WORK DIRECTORATE

DG V/F

L – 2920 LUXEMBOURG
FAX: (++352) 43 01 3 45 11

To be completed by the Commission

SAGA registration no.

* Name of applicant organisation	Karolinska Institutet
* Member State	Sweden
* Name of project leader:	Agneta Yngve
* Title of project: Nutrition'	'A European Master Program in Public Health
* Reference of call for proposals:	
* Date of dispatch to the Commission:	31 January 2001

**To enable us to deal with your dossier correctly, please indicate below the main
Subject area of this project (one cross at most)**

V/F/2:	<input type="checkbox"/>	Cancer
	<input type="checkbox"/>	Drug addiction
	<input type="checkbox"/>	Pollution-related diseases

V/F/3:	<input checked="" type="checkbox"/>	Health education and/or promotion, information and training in the field of public health
	<input type="checkbox"/>	Prevention of accidents and injuries
	<input type="checkbox"/>	Health surveillance

V/F/4:	<input type="checkbox"/>	AIDS and other communicable diseases
	<input type="checkbox"/>	Rare diseases

PART ONE

Administrative and budgetary information

Mark a cross in the boxes which correspond exactly to your project

FIELD OF ACTIVITY

V/F/2

- Cancer
- Drug addiction
- Pollution-related diseases

SANCO/G/3

- Health education and/or promotion
- Information and formation in the field of health
- Health surveillance
- Deliberate and accidental injuries and accidents outside the workplace

V/F/4

- | | | |
|--|--------------------------|---|
| <input type="checkbox"/> AIDS and other communicable diseases | <input type="checkbox"/> | AIDS |
| | <input type="checkbox"/> | Other communicable diseases |
| | <input type="checkbox"/> | Emerging diseases |
| | <input type="checkbox"/> | Surveillance network |
| <input type="checkbox"/> Rare diseases | <input type="checkbox"/> | Establishment of EUROpean information network |
| skills | <input type="checkbox"/> | Training and updating of professional |
| | <input type="checkbox"/> | Promotion of transnational cooperation |
| | <input type="checkbox"/> | Surveillance of rare diseases at |
| Community level | | |

TYPE OF PROJECT

- | | | | |
|---|-------|--------------------------------------|-------|
| * Innovative approaches, pilot project, "model" project | [X] | * Creation and operation of networks | [X] |
| * Evaluation and review | [] | * Conference | [] |
| * Coordination of activity | [X] | * Seminar | [] |
| * Feasibility studies | [X] | * Symposium | [] |
| * Communication | [X] | | |
| * Other (<i>specify</i>): | | | [] |

METHODS

- | | | | |
|---|-------|--|-------|
| * Primary prevention | [] | * Data collection | [] |
| * Secondary prevention, including screening | [] | * Training | [X] |
| * Care, special schemes | [] | * Epidemiology | [] |
| * Social reintegration | [] | * Prevention policy, health care systems | [] |
| * Public information | [] | * Health education | [X] |
| * Exchanges of information and experience | [X] | | |
| * Other (<i>specify</i>): | | | [] |

- | | | | | |
|---|-----|-------------------------------------|----|-------------------------------------|
| * Is the project complementary to a project previously supported by the Commission? | YES | <input checked="" type="checkbox"/> | NO | <input type="checkbox"/> |
| * Is it a new project? | YES | <input type="checkbox"/> | NO | <input checked="" type="checkbox"/> |
| * Are other partners involved? | YES | <input checked="" type="checkbox"/> | NO | <input type="checkbox"/> |

If so, please turn to part 2 item 5

- * What other Member States are involved? -
- | | |
|---|--|
| <input checked="" type="checkbox"/> Austria | <input checked="" type="checkbox"/> Italy |
| <input checked="" type="checkbox"/> Belgium | <input type="checkbox"/> Luxembourg |
| <input checked="" type="checkbox"/> Denmark | <input checked="" type="checkbox"/> Netherlands |
| <input checked="" type="checkbox"/> Finland | <input checked="" type="checkbox"/> Portugal |
| <input checked="" type="checkbox"/> France | <input checked="" type="checkbox"/> Spain |
| <input checked="" type="checkbox"/> Germany | <input checked="" type="checkbox"/> Sweden |
| <input checked="" type="checkbox"/> Greece | <input checked="" type="checkbox"/> United Kingdom |
| <input checked="" type="checkbox"/> Ireland | |

What other, non-member countries are involved? Norway, Iceland currently involved. Poland, Estonia, Czech Republic, Slovenia, Cyprus and Hungary to be invited to participate as of now.

PROPOSED TIMETABLE

- * Planned start of project: Oct 1st, 2001
- * Duration of project (number of months): 15

2. GENERAL INFORMATION ON THE APPLICANT

Name of applicant: Agneta Yngve

* Name of legal representative: Department of Biosciences, Karolinska Institutet

* Abbreviation: KI

* Legal form: * Public/quasi-public [**X**] * Private []

Non-profit-making []

* Address: * Number/street: Novum
* Postcode: S141 57 * Town: Huddinge
* Country: Sweden

* Tel. 1: (+46) 8 608 3300 * Tel. 2: (+46) 8 608 9209

* Fax 1: (+46) 8 608 3350 * Fax 2: (+46) 8 608 3360

* Email: agneta.yngve@prevnut.ki.se

* Registration number:

* Tax or VAT Reg.: SE20210029731

(or proof of VAT exemption)

* Are you part of a network? YES - EUROpean Network For Public Health Nutrition

* Contractual representative of the project

Surname: Fransson

Forename: Rune

Title: Mr

Function: Registrar

Telephone: +46 8 728 6565

Fax: +46 8 306970

(Please note his address is: Administration, Karolinska Institutet, 171 77
Stockholm)

* Project leader

Surname: Yngve

Forename: Agneta

Title: Mrs

Function: University Lecturer

Telephone: +46 8 608 3350

Fax: +46 8 608 3300

PART TWO

Detailed description of the project

1) Statement of project aims

The main aim is to continue the establishment of a European Master's Program in Public Health Nutrition (PHN), leading on from phases one, two and three (September 1997 – December 2000).

Phase one showed that there is potential and capacity, as well as commitment, for the development of the Master's course in Europe. Phase two and three contained an on-going development of core modules, quality assurance, marketing and promotion, and funding for student and teacher transportation. As a result of the work carried out, a number of pilot-modules of the programme have been given. Leading from that, the specific aims of next phase are:

1. Continued development of the core modules and general course structure, including de-centralisation of the overall co-ordination and organisational structure of the course
2. Further development of quality assurance schemes for the course
3. Increasing number of a) modules to be held at participating universities, b) universities participating in the programme, and c) languages used
4. Intensified marketing and promotion, and funding for student and teacher transportation
5. Strengthening of the European Network for Public Health Nutrition, and continued consortium and infrastructure development, including a) co-ordination with other Master's Programmes within the Public Health Program, and b) integration of candidate countries into the programme
6. Establishment of a continuous series of seminars in conjunction with the EU Presidency (Sweden and Belgium for 2001), and a seminar before the world nutrition conference in Vienna

2) How does your project relate to what has already been done in the field?

This phase of the project is an extension to what has been achieved in the previous phases, with the aim of establishing a European Master's Programme in Public Health Nutrition. *The Nutrition Society*, *FAO* and *WHO/WHO Euro/CINDI*, and a number of NGOs and national authorities, have all, directly or indirectly, been involved in the project that have identified the need and/or the competence required for appropriately trained staff.

Today, the development of the *EU Health Monitoring Programme*, especially in the fields of nutrition and physical activity, lends further support to the development of the course curriculum.

Recommendations and other outcomes of the *EURODIET* project and the *French Initiative*, both of which have developed in close relation to the Master's programme, will be integrated as well.

3) Description of tasks/sequence of work/timetable

The project organisation will be developed, mainly through decentralisation of the management. The project will be co-ordinated by a *Steering Committee* (the Project Manager, and the Country Group directors), supported by an *Executive Group* (the Project Manager and the Committee chairs), under the direction of *The European Network for Public Health Nutrition* (previously the Working Group).

The Committees will deal with a) Quality Assurance, b) Student mobility, c) Co-ordination with other MPH Programmes, above all through Intensive Programme developments d) Summer Schools, e) Infra-structure building, and f) Funding, information and reports. The Country Groups will be chaired by a Regional Director, responsible for co-ordination in the Group and support to National directors. Six specific tasks will be completed by the end of this phase of the project:

- 1) Continued development of the core modules, particularly as a result of the modules being held across Europe in the present academic year. Additionally, more recent information and considerations from the EURODIET, the French Initiative and the EU Health Monitoring programme will be integrated.
- 2) Further development of quality assurance schemes for the course, above all by giving the Quality Assurance Committee specific support and independence, and by integration with quality assurance efforts in other Master's Programmes. A course catalogue will be produced.
- 3) Further modules, given in different languages, will be set up in the participating centres across Europe and the number of universities participating in the programme will be increased.
- 4) Emphasis will be put on marketing and promotion of the programme, and funding for student and teacher transportation. Preparative work will be done by the Committee for Student Mobility.
- 5) Strengthening of the European Network for Public Health Nutrition in order to offer a strong foundation for the future and long term running of the pan-European training programme, and continued consortium and infrastructure development. This includes
 - a) co-ordination with other Master's Programmes within the Public Health Program, particularly the Master's programmes in Health Promotion and in Gerontology, where contacts have already been established, and
 - b) integration of candidate countries into the programme.
- 6) The EU Basics course will be arranged in conjunction with the Spanish presidency (June-July 2002, Pamplona).

Meetings	<u>Okt</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
Eur Network	M1						M3		M4			M5		Exec Group	
M1	T	T	T	M2	M3	T	M4	T	T	M5	T	Steering Committee	M1	T	
M2	M3	T	M4	T	T	M5									
National Director			T	T					T			T	T		T

(T= Telephone meeting, M = Meeting)

4) Applicant's ability to attain set objectives

(Experience, facilities, etc.)

The Unit for Preventive Nutrition is part of the Department of Medical Nutrition and the Department of Biosciences at Novum, Karolinska Institutet. The unit also belongs to the Community Medicine Organisation within the local health authority – Stockholm County Council. The work at the Unit deals with Public Health Nutrition and Physical Activity issues as determinants for health.

International collaboration is the cornerstone of the Unit's work. The Unit has an extensive international network, which has been built up over a number of years, for example by running Summer Schools in Public Health Nutrition in Eastern Europe and the co-ordination of the first phase of the pan-European project.

Project Manager, Steering Committee, Executive Group

Agneta Yngve MSc RPHNutr (Registered Public Health Nutritionist) Head of Unit since 1987 and the Director of the PHN program, Stockholm County Council.

Project Secretary, Executive Group, Chair Infrastructure building

Michael Sjöström MD PhD, Assistant Professor. Divides his time between the Unit (see above) and the Department of Physical Education and Health, University of Örebro. He shares the leadership of the unit with Agneta Yngve.

International Liaison Officer, Executive Group

Åsa Strindlund, Nutritionist, Unit for Preventive Nutrition, Department of Biosciences, Karolinska Institutet, Stockholm.

Steering Committee (provisional)

Barrie Margetts PhD RPHNutr. Director of the Masters program in PHN at the University of Southampton, Chair of the Nutrition Society Working Group on PHN and Editor for the Journal of Public Health Nutrition.

Aulikki Nissinen MD, PhD. Professor of Public Health, Head of Department of Public Health and General Practice, University of Kuopio, and Head of Kuopio Graduate School of Public Health.

Carmen Perez Rodrigo MD, Nutritionist. Co-ordinator of the Community Nutrition Unit at the Department of Public Health of the municipality of Bilbao, member of the Board of the Spanish Society of Community Nutrition, member of the European Academy of Nutritional Sciences.

5) Partnership: State name, address, telephone and fax numbers of bodies from other Member States taking part in the project

Representatives from centres from all member states, as well as Norway and Iceland, are involved in the ongoing project and have formed the European Network for Public Health Nutrition (cf. enclosed list of partners). Representatives from candidate countries will be invited to participate.

6) Community dimension and Community added value (please provide full details)

I The project involves participation of all Member States, plus Norway and Iceland (that has lead to the formation of the European Network for Public Health Nutrition) and candidate countries will be invited to participate.
II The activities are conducted jointly in all States, and can not take place in a single country or with only a few partners.
III The whole programme contains a European dimension (cf. Project tile), it has an integral cross curricular content in each module.
IV The proposed course will run across all states.
V Centres of excellence from throughout, within different fields of Public Health Nutrition have been identified, and it is planned that they will run particular modules.

7) Expected results of the project

The tasks are all very explicit in their aims and therefore the outcomes of the project. It will aid the establishment of the Master's course through consortium and infrastructure building leading to advisory/supervisory bodies. It will enable quality control and assurance issues to be addressed, which will allow for common standards across Europe. Marketing and promotion of the program, as well as funding issues will be tackled.

Each of these tasks is vital for the establishment and long term running of a pan European Master's programme.

A report will be written and submitted to the EU (DG SANCO).

8) Assessment and follow-up of the project (provide details of funding expected for this activity at the end of the current project)

An assessment and follow-up is built into the project, enabling the to run elements of the proposed Master's program next academic year (2001/2002).

9) Utilisation and dissemination of results among the scientific community and the general public

The establishment of the European Network for Public Health Nutrition will aid in the rapid and timely dissemination of results among the partner countries. Additionally, contacts have already been established with many outside organisations (including governmental and research organisations) that will aid the dissemination. The present phase of the project has been presented at conferences, the European Summer Schools (EU Basics), as well as having received attention in a number of journals. In addition, information has been posted on the web, which will be further developed.

This gives a good platform from which to continue the dissemination (see report).

10) Methods

Questionnaires, national and international work-shops, networking, pilot project, peer-review (establishment of advisory/supervisory bodies).

Appendix III

Master's Programme in Public Health Nutrition; **Course Document**

**The Unit for Preventive
Nutrition**

The Core Courses within the European Master Programme for
Public Health Nutrition:

Course Document 2000

On behalf of the Working Group

Agneta Yngve

Project Manager

Michael Sjöström

Project Secretary

Daniel Warm

International Liaison Officer

Preventive Nutrition and Physical Activity Reports

Number 5 2000 (ISSN 1402-6031)



Supported by the European Commission,
Health and Consumer Protection, F/3

Courses listed with Core Course Content Committee members at the time of design and to date

Principles of Nutritional Science

Course design: Tim Gill, Rowett Research Institute, Daniel Warm, Karolinska Institutet, Inga Thorsdottir, University of Iceland and Agneta Yngve, Karolinska Institutet.

Course Committee to date: Ibrahim Elmadfa, University of Vienna, Daniel Warm, University of Southampton, Inga Thorsdottir, University of Iceland and Agneta Yngve, Karolinska Institutet.

Principles of Public Health

Course design: Aulikki Nissinen, University of Kuopio, Antonia Trichopoulou, University of Athens.

Course Committee to date: Same as above.

Principles of Physical Activity

Course design: Michael Sjöström, Karolinska Institutet, Agneta Yngve, Karolinska Institutet.

Course Committee to date: Michael Sjöström, Karolinska Institutet, Knut-Inge Klepp, University of Oslo, Agneta Yngve, Karolinska Institutet.

Principles of Health Promotion

Course design: Aulikki Nissinen, University of Kuopio, Antonia Trichopoulou, University of Athens.

Course Committee to date: Same as above.

EU Basics in Public Health Nutrition

Course design: Henriette Chamouillet, European Commission, Jan-Ole Gudmundsen, European Commission, Michael Sjöström, Karolinska Institutet and Agneta Yngve, Karolinska Institutet.

Course Committee to date: Henriette Chamouillet, European Commission, Denis Malvy, Université Victor Ségalen, Bordeaux, Michael Sjöström, Karolinska Institutet, Agneta Yngve, Karolinska Institutet, Daniel Warm, University of Southampton.

Assessment of nutrition and physical activity

Course design: Joop van Raaij, Wageningen University, Marion Burkard, University of Giessen, Anna Ferro-Luzzi, National Institute of Nutrition, Rome, Eric Poortvliet, Karolinska Institutet and Michael Sjöström, Karolinska Institutet.

Course committee to date: Same as above.

Food habits – an integrated approach

Course design: Maria Daniel Vaz de Almeida, University of Porto, Carmen Perez Rodrigo, University of Navarra..

Course committee to date: Same as above.

Epidemiology and Biostatistics

Course design: Barrie Margetts, University of Southampton, Johanna Haraldsdottir, Royal Veterinary and Agricultural University, Denis Malvy, Université Victor Ségalen.

Course committee to date: Same as above.

Food Safety

Course design: Michael Gibney, Trinity College, Dublin and Ibrahim Elmadfa, University of Vienna.

Course committee to date: Michael Gibney, Trinity College, Dublin.

Food and Nutrition Policy

Course design: Agneta Yngve, Karolinska Institutet, Anna Ferro-Luzzi, National Institute of Nutrition, Rome, Marion Burkhard, University of Giessen, Anne-Marie Remaut de Winter, University of Gent, Antonia Trichopoulou, University of Athens.

Research Project and Thesis

The whole working group has together formulated and discussed the content of the Research Project and Thesis.

Principles of Nutritional Science

ECTS 15 credit points

Prerequisites None

Aim

To develop students' knowledge & understanding of the fundamental principles of food and nutrition science relevant to public health in Europe, in order to enable students to develop strategies for life long learning in nutrition science.

Objectives

After the module students will be able to

- Apply knowledge to critically evaluate energy and nutrient reference values and guidelines in Europe
- Critically evaluate variations in nutritional demand due to physical activity level, physiological and health status
- Justify proposed mechanisms of nutritional or health risk in varied or novel situations
- Establish strategies for private study and continuing academic development in nutritional science

Course content

1. Fundamental concepts of nutrition, such as essentiality, bio-availability, balance, turnover, requirements and dietary reference values (etc), as they apply to:
 - Energy and macronutrients: Carbohydrates Non-starch polysaccharides, Fat, Protein, Alcohol, Water & electrolytes, Energy intake & expenditure (including physical activity) and body weight
 - Micronutrients and other components of food: Vitamins, Minerals, Non-nutritive components, Functional foods, Supplements
2. Interaction of nutrition with physical activity, physiological status (during the life cycle)
3. Nutrition and function in health, disorders. Risk factors of disease. Breastfeeding.

European Dimension

Examples will be used from across Europe, for diet, nutritional reference values and guidelines.

Physical Activity Dimension

This is integral to the objectives for and content of this module, as part of energy expenditure and balance and as an influence on demand for and consumption of nutrients.

Teaching and learning approaches

Lectures supported by extensive reading before and during the module. There will also be problem-based learning, for example:

- 1) Diet, food and nutrients. Participants will be asked to assess the sources of nutrients in their own diets compared with national and European patterns. How do they compare? What are the differences? Report on how the results compare to European, national and international reference values or guidelines.
- 2) Literature study or simulation: Groups work on different micronutrients to investigate main function(s) – food sources – requirements, reference values and safe levels of intake. They submit a written report to share with the class in short presentations. Other topics may include nutritional requirements of specific groups.

These problem based activities will be designed to ensure that students are involved in 'complex, unpredictable and, normally, specialised situations demanding innovative work, which may involve exploring the limits of knowledge' consistent with Master's level.

Assessment

The written reports on the problem-based learning activities and an unseen written examination.

Notes

Students from a non-nutrition background must be willing to devote time to extensive prior reading as well as developing their nutritional knowledge continually during the module.

Principles of Public Health

ECTS 10 credit points

Pre-requisites None

Aim

To enable students to develop knowledge and understanding of the fundamental theories and concepts of public health to underpin further learning and professional practice of Public Health Nutrition in Europe.

Objectives

After the module, students will be able to:

- Describe the current national and European public health issues at the international context and their relation to nutrition;
- Define and find solutions to an important public health problem;
- Identify the sources of support that will facilitate evaluation and criticism of existing systems.

Content

1. *Public health in a historical perspective*
Public health ideology “human rights”; Public health history; Health inequalities; The industrial revolution and health; The scientific revolution and health; Health sociology.
2. *Health systems*
Evolution, Legislation, Comparison and criticisms of health systems in the European context; how the political and health systems influence nutrition education.
3. *Introduction to biostatistics and epidemiology*
Measures of effect and measures of association, Health indicators; Demography, -Patterns of health and disease in Europe. Health and nutrition surveillance.
4. *Health economics*
Principles of economics: Macro- and micro desirability and feasibility of health and nutrition policies.
5. *Environment*
Environment and health, Implications of environmental policies for nutrition and physical activity.
6. *Public health policy*
How public health policy is related to nutrition policy and to common agricultural policy.
Interactions between health, nutrition (including physical activity) and agricultural policies.

European Dimension

The module will primarily use European data, reports, legislation, as well as other information and resources.

Physical Activity Dimension

Physical activity will be included in relation to health, nutrition and environment (i.a.).

Teaching & Learning Approaches

Lectures, seminars, group work for case or problem, distance learning.

Assessment

Written examination. Assessment of written reports on solutions to problems.

Principles of Physical Activity

ECTS 5 credit points.

Prerequisites None.

Aim

1. To provide students with an understanding of the meaning of the terms used in health enhancing physical activity and exercise physiology.
2. To provide students with detailed theoretical knowledge and understanding of the way physical activity affects human physiology and health development from a public health perspective.
3. To enable students to contribute effectively to discussions concerning physical activity, its relationship with nutrition (and other lifestyle factors) and their effect on health.

Objectives

By the end of the module, students will be able to:

1. Explain the fundamentals of exercise physiology;
2. Understand the theory behind the measurement of physical activity and fitness (background to the assessment module);
3. Understand the importance of physical activity in relation to nutrition;
4. Understand the fundamental theory behind the health enhancing effects of physical activity;
5. Understand support systems and fundamental obstacles for physical activity;
6. Have general knowledge of the present organisation of physical activity promoting structures in society.

Contents

Introduction to health-enhancing physical activity and exercise physiology
Exercise physiology and fitness development
Physical activity and health relationships
Physical activity patterns in Europe
Pathophysiology of physical activity
Socio-economic differences
Physical activity and risk
Physical activity and transportation
Environmental aspects
Guidelines and recommendations
Physical activity promotion
Introduction to assessment

Teaching and learning approaches

Lectures, seminars, group discussions, practicals

European Dimension

Patterns of physical activity/inactivity across Europe
Organisation in Europe
Guidelines and recommendations in Europe

Assessment

Written examination.

Principles of Health Promotion

ECTS 10 credit points

Prerequisites Desirable: 55 – 60 credit points, including Principles of Public Health

Aim

To equip students with detailed theoretical knowledge and the understanding of health promotion that they need to be able to contribute effectively to planning, implementation and evaluation of nutrition and health promotion.

Objective

After completion of the course, each student will show that he/she:

- Knows the principles and key components of the practice of health education and health promotion policies and programs;
- Can translate the current scientific knowledge on relationships between nutrition and health into nutrition guidelines and subsequently into targets and food based advice which are relevant in socio-cultural contexts (considering differences between age, gender, ethnicity and between different geographic reasons), at population and/or sub population levels;
- Is able to design and implement intervention projects and programs, masters methods for monitoring and evaluating effectiveness and efficacy;
- Understands the sociology and politics of institutions, stake holders, agents and agencies in national and global food and public health systems; sustain ability and equality in public health nutrition programs;
- Understands the theory and critical appraisal of public health food and nutrition policies at population (national and regional) and international levels.

Content

1. Theories of health education and health promotion.
2. Concept of community organisations.
3. Leadership in health promotion.
4. Planning, implementing and assessment of health promotion program.
5. European dimension of public health and health promotion.
6. Identification of health problems, European and global:
 - Social and health policy; Health indicators; Immigration; Minorities; Legislation.

European Dimension

This will be integral to the module in the form drawing on the European thesaurus, frameworks, institutions, databases for patterns of health, diet, nutrition and physical activity and other lifestyle or health behaviours.

Physical Activity Dimension

Students will be encouraged to relate nutrition to physical activity as integral parts of the promotion of healthy lifestyles.

Teaching and learning approaches

Lectures, seminars, group projects.

Assessment

Written examinations and/or assessment of written reports on assignments (case study or problem-solving).

EU Basics in Public Health Nutrition

ECTS 5

Aim

1. To provide students with detailed theoretical knowledge and understanding of the organisation and functions of the European Union.
2. To enable students to contribute effectively to lobbying, planning and policy-making on the European arena.
3. To provide students with an understanding of the meaning of added value in European Community – wide and international collaboration.
4. To facilitate networking and co-operation among students from different member-states in the EU.

Objectives

By the end of the module, each student should be able to show that he/she:

- Knows about the present organisation of the European Union, and how to get updates on developments;
- Understands the underlying regulations for public health nutrition in EU and how this corresponds to EFTA countries, Eastern European countries and the rest of the world;
- Can critically appraise the role and functions of the European Commission, in public health nutrition;
- Is motivated to contribute actively to foster a European Communities perspective in public health nutrition policy and professional practice.

Content

The module will support the EU Dimensions in the rest of the course by developing students' detailed knowledge of:

- History of the EU, present organisation, funding and governance, possible future developments including implications of expansion;
- Countries' representation in relevant committees in the European Commission; Lobby groups in the EU;
- Commission Directorate Generals dealing with nutrition, physical activity and health and related sectors;
- Surveillance and data gathering related to health, life style, risk groups and risk factor assessment;
- Recommendations and guidelines on nutrition, physical activity and health in Europe;
- Agricultural policy within EU – in support of the details learnt in other modules;
- Aid, trade and international relations and regulations;
- Research with emphasis on project funding.

European Dimension

The whole module.

Physical Activity Dimension

Students will be encouraged to analyse the extent to which nutrition and physical activity are the subjects of recommendations and guidelines and how research funding can be found for both. Committees that consider Physical Activity in the EU e.g. as a risk factor to be assessed and monitored.

Teaching and learning approaches

- Attendance at ONE summer school is mandatory
- There is one assignment that is formative not summative

Lectures and seminars in a mobile manner, somewhere in Europe, organised by local partner in collaboration with the European Commission, as a Summer School. Completed with a distance learning section.

Assessment

Formative assessment of a funding proposal, written by students in groups.

Indicative reading and other learning resources

Key texts.

EU reports and publications.

Nutrient and energy intakes for the European Community. Reports of the Scientific Committee for Food (31st series).

European Commission Employment and Social Affairs. The State of Women's Health in the European Community. Office for Official Publications of the European Communities, Luxembourg, 1997.

European Commission. The State of Health in the European Community. Office for Official Publications of the European Communities, Luxembourg, 1996.

Lillehök, B., Pushka, P., Schnocks, H., Sharp, I., Stiggelbout, P., Tounas, Y., Wood, D., European Heart Health Initiative. An Expert Report on European Action in the field of CVD Prevention. European Heart Network. Luxembourg, 1997.

Commission Employment and Social Affairs. The State of Women's Health in the European Community. Office for Official Publications, Luxembourg, 1997.

European Commission (1997): Work program for 1997 of the Community action program on health promotion, information, education and training, Official Journal of the European Communities C18, 40: 17, Brussels.

Institute of European Food Studies (1996): A pan-EU survey of Consumer Attitudes to Food, Nutrition and Health, Report NR. 4, Dublin.

European Commission Website.

Articles, papers and reviews.

Assessment of nutrition and physical activity

ECTS 10 credit points

Prerequisites Principles of Nutrition Science, Principles of Public Health.

Desirable: Food Safety, Food habits and Physical Activity.

Aim

By the end of the module each student will be able to:

1. Choose and defend the appropriateness of their choices of methods for each of a varied range of purposes;
2. Critically evaluate the uses and limitations of each of the assessment methods;
3. Competently perform assessment methods.

Objectives

By the end of the module each student will be able to perform:

a) Dietary assessment

- Describe the advantages and limitations of methods of dietary assessment viz. 24-hour recall, food record, food frequency, diet history;
- Define the sources of error in dietary assessment and describe the relative importance for these different methods;
- Describe methods for calibration;
- Perform dietary assessments including the use of appropriate European and other food intake data bases and nutrient analysis software.

b) Anthropometry

- Describe the advantages and limitations of anthropometric assessment;
- Describe the sources of error in nutritional anthropometry;
- Describe the most common anthropometric methods and indices and their calibration;
- Use appropriate types of anthropometric reference data for different population groups;
- Perform anthropometric measurements, including skinfolds at four sites.

c) Physical activity assessment

- Demonstrate understanding of the relationship between physical activity, fitness and health and the differences between physical activity, exercise and physical fitness;
- Describe methods for the assessment of aerobic fitness;
- Show understanding of and be able to define the components of total energy expenditure as well as patterns of physical activity;
- Describe the main methods, the physiological principles upon which assessment of physical activity is based and the advantages and limitations of : indirect calorimetry (laboratory, ambulatory), the doubly labelled water method (DLW); the minute-by-minute heart rate monitoring; the diary method; movement assessment devices; questionnaires;
- Make each of the following measurements, and after data entry, calculate TEE RMR and 24 hour energy expenditure:
24 hour activity diary; other indirect calorimetry measurements; minute by minute heart rate monitoring; 24 hour CSA activity measurement, and activity profile calculation.

Content

Introduction builds on Principles of Nutritional Science to:

- Review and develop students' knowledge of understanding of the purposes of each type of assessment (i.e., Research, screening and surveillance, problem solving, baseline data);
- Selection of assessment strategy (objectives, criteria, logistics, time, cost/benefit);
- Introduction of the theory and practice of validation and measurement error.

a) Nutritional Status

Body composition

Biochemical and molecular indicators

Functional indicators

Pathophysiological indicators (blood pressure, bone density)

European references/standards (cut-off values, reference values, quality control in labs, cross-lab standards)

b) Dietary Intakes

Methods: advantages and limitations

Selection of methods (deciding on variables, targeting, questions, selecting databases)

Tables of food composition

Reference values, their background and use

c) Energy expenditure and physical activity levels

Methods for assessment

Need for European standardisation

Unanswered questions

Other lifestyles

d) Assessment of potential value of combining two or more assessment strategies to integrate the sub-topics

European Dimension

The reference values, databases and other resources, issues of standardisation and the problems considered will be (mainly) European.

Physical Activity Dimension

This is an integral and major part of the objectives and content of this module.

Teaching and learning Approaches

- Lecture and learning guides may introduce sub-topics that will be integrated through a critical evaluation of scientific articles as the basis for problem-based learning. The lectures and students' discussions should support practical sessions in each sub-topic.
- Practicals – for the demonstration of and performing assessment measurements (biochemical, physiological and computer laboratory)
- Seminars/tutorials for discussion of problems in the literature and practicals.

Assessment

Written reports of solutions to problems for each type of assessment method.

Food habits: an integrated approach

ECTS 10 credit points

Prerequisites Principles of Nutritional Science

Aims

1. To give students the theoretical basis for understanding the complex nature of food habits.
2. To enable students to identify the determinants of food habits

Objectives

By the end of the module, students will be able to:

- Describe the historical changes in food consumption patterns;
- Describe and compare models of food consumption in Europe and internationally;
- Describe ideologies and theories of the societal significance of foods and feeding;
- Describe the theories to explain the links between emotions and food choice;
- Describe the key issues concerning food practices and special groups of the population;
- Describe and analyse experience from public health programs for promoting dietary and lifestyle changes;
- Describe methods for researching food habits;
- Apply their knowledge to explore the emotional and social aspects of food choices and feeding as individuals and as part of a team;
- Apply their knowledge to help solve a problem of food habits.

Contents

1. *Food in a historical perspective*
Consideration of food production and consumption considering diet, physical activity and human evolution, the prehistoric world, the agricultural revolution, the New World, the industrial revolution and the scientific revolution.
2. *Models of food consumption in the world and public health*
Models of food consumption and physical activity in countries at different stages of economic development and the implications for public health; world food supply and the impact of the EU on food availability in European countries.
3. *Food ideology*
Includes consideration of food choices in relation to culture, ethnocentrism and cultural relativity; food symbolism; myths and taboos; religion; culture and body image, and health beliefs; cuisine and gastronomy; meal patterns and structures in Europe.
4. *Food and society*
Socialisation and food habits, food in the life cycle, food and social status; food and social behaviour; mass media
5. *Food and emotions*
Sensory perceptions of food; physiological aspects of food choice; food preferences.
6. *Food practices and special groups relevant to Public Health Nutrition*
E.g. migrants, ethnic minorities, elderly, people with special needs.
7. *Promoting dietary changes and physical activity*
Nutrition health education for the general public and in schools (linked with Principles of Health Promotion)

European Dimension

European information, programs and policies will be studied.

Physical Activity Dimension

Students will be encouraged to approach dietary habits and physical activity as lifestyles in historical, cultural and societal contexts.

Teaching and Learning Approaches

Lectures and guided private studies will prepare students for active learning through participation in seminars, individual and group work.

The methods of teaching will:

- Enable students to learn to the required levels of learning outcome;
- Enable students to enhance self – reflection;
- Stimulate the development of communication and inter-personal skills and competence conducive to developing professional work relationships.

Problem-based learning

a) Methods of biographical self-reflection:

- Keeping a food diary followed by group discussion about number of meals, places where food has been eaten, times, with whom etc...
- Guided fantasies: group comments on food habits in personal life.

b) Presenting facts for group discussion:

- Case-studies and group discussion
- Literature review and group comments

c) Group research in this field:

- Develop a questionnaire and carry out directed team research.

Assessment

Essay.

Oral and written reports of group research based either on a literature review or field work. The group work will be presented to all the students for discussion.

Epidemiology and Biostatistics

ECTS 10 credit points

Prerequisites: Successful completion of Principles of Nutrition Science, Principles of Public Health, Assessment. Students with limited statistical experience should read starred * titles **prior to** the module.

Aim

To enable students to design and interpret nutritional epidemiological (research) studies.

Objectives

At the end of the module each student will have sufficient knowledge for application in novel situations or to deal with original problem in:

- Basic concepts in nutritional epidemiology;
- Theory and practice of designing studies;
- Validation and calibration of measures of exposure;
- Choice and use statistics appropriately;
- Critical evaluation of published literature;
- Appraisal as a basis for formulation of recommendations.

Content

- Types of study: cross-sectional, cohort, case-control, experimental studies, evaluation, nutritional surveillance.
- Measures of exposure relevant for epidemiological studies.
- Development of measures of exposure.
- Measures of outcome and risk.
- Chance, bias, confounding.
- Sampling, study size and power.
- Validation and calibration of methods; measurement error and misclassification.
- Analysis of epidemiological studies; probability and hypothesis testing.

European Dimension

All data and examples of research literature explicitly:

European/International, especially MONICA, EPIC, of national & international requirements for design, calibration, interpretation and inference.

Physical Activity Dimension

Physical activity level will be of explicit and direct relevance to diet, health and other issues considered.

Teaching and learning approaches

The course will use a problem based learning approach. Fundamental concepts will be covered in didactic lectures, supported by prior reading and followed by seminar and discussion group work.

For each type of epidemiological study design students will be asked to do the following:

1. Critically review, and present to the group, an original research paper.
2. Develop a protocol (in a team) for the design and analysis of a specific study (having agreed on the aims and objectives, key exposure and outcome measures) and present the protocol to the group for comments and discussion.

Assessment

Will be by continuous assessment of performance in group work and written reports.

Food Safety (including food technology & catering)

ECTS 5 credit points

Prerequisites Principles of Nutrition Science and Principles of Public Health

Aim

To equip students with sufficient knowledge and understanding of the theory of and practice in food safety, food service to contribute to risk assessment and management in relevant public health nutrition programs.

Objectives

By the end of the module the students will be able to show that they:

1. Understand the principles and dimensions of food safety
2. Can contribute to risk communication
3. Can contribute to risk assessment and management.

Contents

Overview of the key concepts to support public health and nutrition science:

1. Food and water safety

1.1 Chemicals

Introductory toxicology or ecotoxicology: Nature of food/water borne toxicants/allergens. Naturally occurring toxins, allergens, pesticides, contaminants, additives, packaging material. Background to risk assessment, risk management and risk communication. Local, EU, global regulatory framework. Exposure estimates. Bioavailability or bioenhancement, (building on Principles of Nutritional Science); Direct versus indirect; trends in food consumption and the use of food intake databases in risk assessment; coding systems.

1.2 Biological (microbiological/entomological)

Introductory basic food microbiology and hygiene; food - borne infectious disease surveillance; Food storage. Issues of antibiotic resistance of public health significance (linked to the module Principles of Public Health).

2. Food Technology

Basic food technology (physical/chemical processing); New technologies; GMO – derived food and ingredients; Functional foods; Food quality management; Food technology and nutritional value; Packaging technology.

3. Catering

Overviews of significance of mass catering outside the home, at institutional level, for vulnerable groups, e.g. meals on wheels. Issues of ethnic diversity and food choice will link with the Food Habits module.

4. Labelling

Purposes and types of labelling - Ingredients, Quality/use information, Nutritional, Health and other claims) within EU, global regulatory frameworks. Nutrition information and education issues will be considered further in the modules: Principles Health promotion and applied in Food and Nutrition Policy.

European Dimension

Emphasis will be placed on European data, legislation and regulatory frameworks within an international context.

Physical Activity Dimension

This will include consideration of the claims that products or supplements can enhance physical activity endurance or performance and implications for food safety, food service and labelling policies in the EU.

Teaching and learning approaches

Lectures will be supported by directed private studies. Teams or individual students will solve problems, based on practical, realistic issues (see annex for detailed examples).

Assessment

Assessment of written reports on solutions to individual and team problems.

ANNEX: Problems in Food Safety:

Examples of team problems in Food Safety:

ECTS 10 credit points

Prerequisites

At least 85 credit points, i.e. after completing all modules except EU Basics and the Research project & Thesis.

Aims

1. To enable students to integrate and apply all their knowledge and skills in public health nutrition to the development and analysis of food and nutrition policies with special reference to Europe.
2. To enable students to further develop professional and personal competencies in advocacy

Objectives

At the end of the module each student will be able to:

- Justify the theoretical bases for critical appraisal of food and nutrition policy at national and European level, within an international context;
- Contribute effectively to the planning (including implementation and monitoring) of food and nutrition policy, taking into consideration health issues;
- Make reasoned proposals for implementation and monitoring of food and nutrition policy, taking into consideration health issues;
- Make reasoned proposals for monitoring and evaluating food and nutrition policy, taking into consideration health issues;
- Be competent in advocating food and nutrition policy planning.

Contents

- History and philosophy of national food and nutrition policies in EU and internationally, in the context of GATT, CAP, other food-, economic- and health frameworks including information systems, goals and targets.
- National and European Law (international), especially food and trade regulations from the perspective of food as a human right.
- Inter-relations of nutrition, health (including physical activity) and social policies with agricultural and economic policies.
- Assessment of nutritional, environmental and health-related (including physical activity) impacts of national, European and international food and trade regulations.
- Theory and practice of planning (managing, monitoring, evaluating) food and nutrition security interventions and other policy actions at European, national and local levels. Uses and limitations of surveillance data, quantitative and qualitative.
- Lobbying for health, including physical activity, healthy food and nutrition at different levels and the roles of community and other non-governmental groups.
- Interrelationships among community, private and public sector stakeholders in policy formulation, implementation, monitoring and evaluation.

European Dimension

The benefits of collaboration and common approaches in European communities to improve health, diet and lifestyle will be a strong theme in the examples considered, the sources of information and other resources.

Physical Activity Dimension

Policy objectives for improving health through promoting healthier lifestyles will integrate physical activity with diet and other health behaviours and risk factors.

Teaching and learning approaches

Seminars led by staff, including European experts will facilitate private studies preparatory to group work. Distance tuition guides.

Assessment

Written report of individual assignments e.g. critical analyses of a policy.

Written report and discussion of food and nutrition policy developed by a small team of students.

Research project and thesis

ECTS 30 credit points.

Prerequisites 90 credit points or equivalent in the European Masters in Public Health Nutrition or equivalent course.

Aim

1. To enable students to demonstrate their ability to apply knowledge of all aspects of Public Health Nutrition in order to plan and execute and report on a research project.
2. To critically evaluate their research as evidence upon which to make recommendations for actions relevant to policy in Public Health Nutrition in the EU.
3. To demonstrate competence required to begin professional practice in Public Health Nutrition in the EU.

Objectives

Students will show they are able to:

- Formulate a clear statement of a research question;
- Undertake a clear and well-constructed literature review well;
- Design and plan projects clearly;
- Identify and justify methods (e.g. validity, size, sampling);
- Complete a research project within clearly defined time and resource constraints;
- Organise and present results;
- Interpret and discuss critically (chance, bias, confounding);
- Demonstrate critical appraisal of and reflection on the implication of the research in evidence based practice;
- Demonstrate ability to interpret the relevance of the research to policy in Public Health Nutrition in the EU.

Students will also show competency in time, resource and project management, scientific and professional writing and scientific and professional oral communication.

Content

Students will be expected to choose a topic that will enable them to use and apply competencies in theory and measurement gained throughout the course.

For example, a topic such as ‘Comparison of folic acid nutrition in sedentary and moderately active young adults’, may be expected to apply knowledge of and competence in (i.a.):

- The dietary supply and utilisation of folic acid from Principles of Nutritional Science;
- Supplements and food labelling from Food Safety;
- Methods of measurement of folate intake, physical activity from Assessment and the Principles of Physical Activity;
- Design of the research from Epidemiology and Biostatistics;
- Policy and practical implications from Health Promotion and Food and Nutrition Policy and EU Basics modules.

Teaching and Learning approaches

A tutor/supervisor will provide personal advice and guidance for each student during each stage of the project and preparation of the thesis. Students will be encouraged to present their protocols and interim findings to small groups of peers for discussion and formative feedback. Students will be work with a high level of self-directed independence.

Assessment

Written thesis of a format and length to be specified in accordance with individual universities’ regulations will be submitted for examination to a panel of examiners.

This panel will:

- Advise on the suitability of project proposal;
- Externally examine all the theses

An oral examination may be required at some universities.

European Dimension

An explicit objective of the project or the thesis will be to address the implications of the research for public health nutrition in the EU.

Indicative reading and learning resources.

Students will be expected to select and appraise appropriately texts and current literature relevant to the topic of the research in the thesis.

Appendix IV

Master's Programme in Public Health Nutrition; **Availability of Courses**

September 2001 to December 2001

Module/week beginning	27/8	3/9	10/9	17/9	24/9	1/10	8/10	15/10	22/10	29/10	5/11	12/11	19/11	26/11	3/12	10/12	17/12
Nutritional Epidemiology (Southampton)																	
Principles of Nutritional Science (Iceland)																	
*Assessment (Karolinska Institutet)																	
Principles of Physical Activity (Karolinska Institutet)																	
**Macronutrients (Copenhagen)																	
**Micronutrients (Copenhagen)																	
Nutritional Epidemiology (Copenhagen)																	
Nutritional Assessment (Copenhagen)																	
Sociology of food (Copenhagen)																	
Epidemiology and Biostatistics (Athens)																	

*Assessment module in two parts – see May to August ** Macronutrients, micronutrients and diet related diseases (February to June) constitute Principles of Nutritional Science. Exams also 20-23/12/01 and 2-15/01/02

September 2001 to December 2001

Module/week beginning	27/8	3/9	10/9	17/9	24/9	1/10	8/10	15/10	22/10	29/10	5/11	12/11	19/11	26/11	3/12	10/12	17/12
Fundamentals of Nutrition (Kuopio)#																	
Introduction to public health nutrition (Kuopio)#																	
Introductory course in public health (Kuopio)§																	
Nutrition in Public Health Seminar (Kuopio)§																	
Health Education (Kuopio)t																	
Psychology and communication of Nutrition Counselling (Kuopio)t																	
Exercise as a treatment (Kuopio)¥																	
Biostatistics (Kuopio)H																	
Patient Interview (Kuopio)Φ																	
Measurement of Physical Fitness 2 (Kuopio)Φ																	
Research methods in Nutrition (Kuopio)Φ																	

Module/week beginning	27/8	3/9	10/9	17/9	24/9	1/10	8/10	15/10	22/10	29/10	5/11	12/11	19/11	26/11	3/12	10/12	17/12
Nutrition anthropology 2 (Kuopio)Ψ																	
Health Sociology (Kuopio)Ψ																	
Food hygiene KuopioΩ																	
Idea of Europe (Kuopio) σ																	
Food: Culture, skills and safety (Edinburgh)																	
Nutritional Epidemiology (Edinburgh)																	
Perspectives in Public Health (Edinburgh)																	
Principles of Nutrition Science (Edinburgh)																	

#Fundamentals of nutrition, introduction to public health nutrition, nutrition physiology (January to February) and basics in nutritional therapy (March to May) constitute Principles of Nutritional Science.

§Introductory course in public health, nutrition in public health seminar (September to April) and International health (March) constitute Principles of Public Health
 †Health Education and Psychology and communication of Nutrition Counselling (also January to March) constitute Principles of Health Promotion

¥ Exercise as a treatment, exercise and nutrition 1 (January) and Exercise Physiology 2 (Spring – no date, every other year) constitute Principles of Physical Activity

‡Biostatistics, epidemiology (February to March), introduction to quantitative social research (February to March), and social epidemiology (April) constitute epidemiology and biostatistics

Φ Patient Interview (also January to April), Measurement of Physical Fitness 2, Research methods in Nutrition, Exercise and Nutrition 2 (January to February) and Measurement of physical fitness 1 (May) constitute Assessment

ΨNutrition anthropology1 (literature based) & 2 (also web based), health sociology, and unorthodox nutrition therapy (by appointment) constitutes food habits.

ΩFood hygiene, food control (February to March), Food analysis (January to April) constitute food safety.

ΣIdea of Europe and Policy making and politics of health (June) constitute EU Basics

January 2002 to April 2002

Module/week beginning	7/01	14/01	21/01	28/01	4/02	11/02	18/02	25/02	4/03	11/03	18/03	25/03	1/04	8/04	15/04	22/04	29/04	6/05
Principles of Nutritional Science (Karolinska Institutet)							■	■	■	■	■							
Principles of Health Promotion (Karolinska Institutet)												■	■	■	■	■	■	■
**Diet related diseases (Copenhagen)				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Public Health Nutrition (Copenhagen)				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Food Habits: AIP (Oporto)			■	■														
Food and Nutrition Policy (Oporto)					■													
Nutrition Physiology (Kuopio)#	■	■	■	■	■													
Basics in nutritional therapy (Kuopio)#										■	■	■	■	■	■	■	■	■
Nutrition in Public Health Seminar (Kuopio)§	■	■	■	■	■	■	■	■	■	■	■	■	■					

January 2002 to April 2002

Module/week beginning	7/01	14/01	21/01	28/01	4/02	11/02	18/02	25/02	4/03	11/03	18/03	25/03	1/04	8/04	15/04	22/04	29/04	6/05
International Health (Kuopio)§																		
Psychology and communication of Nutrition Counselling (Kuopio)t																		
Exercise and Nutrition1 (Kuopio)¥																		
Epidemiology (Kuopio) H																		
Quantitative Social Research (Kuopio) H																		
Social epidemiology (Kuopio) H																		
Patient interviews (Kuopio) Φ																		
Exercise and Nutrition2 (Kuopio) Φ																		
Food control (Kuopio)Ω																		
Food analysis (Kuopio)Ω																		

Module/week beginning	7/01	14/01	21/01	28/01	4/02	11/02	18/02	25/02	4/03	11/03	18/03	25/03	1/04	8/04	15/04	22/04	29/04	6/05
Nutrition management & catering (Kuopio) [∞]																		
Nutrition: Policy and Planning (Edinburgh)																		
Evaluation of Practice (Edinburgh)																		
Clinical Sciences (Edinburgh)																		
Promoting Health: Philosophy and Principles (Edinburgh)																		

**Macronutrients, micronutrients (both September to December) and diet related diseases (also May to June) constitute Principles of Nutritional Science

Nutrition physiology, basics in nutritional therapy, fundamentals of nutrition (September to December), introduction to public health nutrition (September to December), constitute Principles of Nutritional Science.

§Nutrition in public health seminar, International health, and Introductory course in public health (October to December), and constitute Principles of Public Health

tCommunication of Nutrition Counselling (also September to December) and Health Education and Psychology (October to December), constitute Principles of Health Promotion

¥ Exercise and nutrition 1, Exercise as a treatment (November), and Exercise Physiology 2 (Spring – no date, every other year) constitute Principles of Physical Activity

HEpidemiology (February to March), introduction to quantitative social research, social epidemiology and Biostatistics (October to December) constitute epidemiology and biostatistics

Φ Patient Interview (also September to December), Exercise and Nutrition 2, Measurement of Physical Fitness 2 (September), Research methods in Nutrition (October to December), and Measurement of physical fitness 1 (May) constitute Assessment

ΩFood control, Food analysis, Food hygiene (September to October) constitute food safety.

∞ Nutrition management & catering and nutrition policy (literature based) constitute Food and Nutrition Policy.

May 2002 to August 2002

Module/week beginning	6/05	13/05	20/05	27/05	3/06	10/06	17/06	24/06	1/07	8/07	15/07	22/07	29/07	5/08	12/08	19/08	26/08
*Assessment (Karolinska Institutet)		■	■	■	■												
EU Basics (Karolinska Institutet)																	
**Diet related diseases (Copenhagen)	■	■	■	■	■	■											
Public Health Nutrition (Copenhagen)	■	■	■	■	■	■											
Basics in nutritional therapy (Kuopio)#	■	■	■														
Measurement of Physical Fitness 1 (Kuopio) Φ	■																
Policy making & politics of health (Kuopio)σ							■										

*Assessment module in two parts – see September to December

**Macronutrients, micronutrients (both September to December) and diet related diseases (also February to April) constitute Principles of Nutritional Science

#Basics in nutritional therapy, fundamentals of nutrition (September to December), introduction to public health nutrition (September to December) and nutrition physiology (January to February) constitute Principles of Nutritional Science.

ΦMeasurement of Physical Fitness 1 , Patient Interview (also September to April), Exercise and Nutrition 2 (January to February), Measurement of Physical Fitness 2 (September), and Research methods in Nutrition (October to December), constitute Assessment.

σ Policy making & politics of health and Idea of Europe (September) constitute EU Basics

Appendix V

Master's Programme in Public Health Nutrition;
Update on the progress at partner universities

Appendix VI

Master's Programme in Public Health Nutrition; **EU Basics in Public Health Nutrition Course Report**

Appendix VII

Master's Programme in Public Health Nutrition;
Pamphlet

Appendix VIII

Master's Programme in Public Health Nutrition;
EuroNutNet Newsletters

Appendix IX

Master's Programme in Public Health Nutrition; **Minutes of Meetings**

Preventive Nutrition and Physical Activity Reports

The Unit for Preventive Nutrition consists of two subunits;

- The Resource and Information Centre in Medical Nutrition, which belongs to the community medicine organization within the local health authorities, Stockholm County Council,

- The Unit for Preventive Nutrition at CNT, which is a part of Dept Medical Nutrition and Dept Biosciences at Novum/Centre for Nutrition and Toxicology (CNT) at Karolinska Institutet, Stockholm.

The work at the Unit deals with Public Health Nutrition and Physical Activity issues as determinants for health.

Study design for baseline surveys and intervention studies are prominent parts of the Unit's daily work. Methodology development and validation are important tasks. Pre- and post-graduate training is provided for many disciplines.

International collaboration is the corner stone of the Unit's work. The Unit is, on behalf of the European Commission, co-ordinating the development of a European Master's Program in Public Health Nutrition.



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