CURRICULUM 2023-2026 Master's programme in Human nutrition and food-related behaviour

Contents

Name

- Ihmisen ravitsemuksen ja ruokakäyttäytymisen maisteriohjelma
- Magisterprogrammet i human nutrition och matbeteende
- Master´s Programme in Human Nutrition and Food-Related Behaviour

Degree titles

Master of Science, MSc

Degree level (Bachelor, Master, Doctorate/QF level)

Master's degree / EQF level 7

Degree languages

English, Finnish, Swedish

Responsible persons

Programme Director Riitta Freese

Profile

The Master´s Programme in Human Nutrition and Food-Related Behaviour (HNFB) combines expertise from three different faculties on human nutrition at the individual and population levels, social and behavioural sciences as well as life sciences. The programme offers a wide range of opportunities to address current issues in nutrition and food-related behaviour.

The HNFB Master's programme has two study tracks: Human Nutrition (HN) and Food-Related Behaviour (FB). These two tracks approach food and nutrition issues from different perspectives. In the Human Nutrition track the student builds on the previous knowledge of nutrition science acquired in the bachelor's degree. In the Food-Related Behaviour study track the student with a relevant social or behavioural science background will broaden their knowledge to questions related with food and eating.

Students have the opportunity to focus or expand their studies according to their interests. In both study tracks, the programme provides interdisciplinary skills for professional careers that respect human dignity and natural values.

Issues related to the sustainability challenge of the food system require an interdisciplinary approach. The values of the University of Helsinki: truth, Bildung, freedom and inclusivity guide the operation of the education program. The HNFB aims to be a thriving scientific community of students, teachers and researchers interested in various areas of nutrition science, food-related behaviour and food culture..

Key learning outcomes and the aim of the training

The aim of the HNFB Master's programme is that the student will be able to

- evaluate and analyse the role of nutrition in the functioning of the body and sustaining health, as well as the cultural and social meanings of food-related behaviour.
- analyse the physiological, psychosocial, social, cultural and sustainability-related aspects that are linked to food selection of individuals and communities
- develop an understanding of the multidimensional nature of nutrition and food issues and the means to influence them.

The study track and the personal interests will shape how the key themes and objectives of the Master's programme are emphasised in the degree.

- Human Nutrition study track: the student will deepen or broaden the existing knowledge of natural sciences and nutrition science in the direction of public health nutrition and/or nutritional physiology and molecular nutrition.
- Food-Related Behaviour study track: the student will deepen the existing knowledge of social or behavioural research and ways of influencing to food choices and eating.
- The student may combine studies from the different study tracks in their degree and develop a broad understanding of the themes of the Master's programme. On the other hand, it is also possible to deepen one's expertise in the direction of one's own interests.

Upon completion of the degree, the student will have a solid knowledge of their discipline and the ability to update it. They will be able to search and interpret scientific information, be familiar with the main research frameworks in their field and be able to design and carry out research on food or nutrition issues. Graduates of the programme will recognise their social responsibility as experts and their potential for contributing to the various aspects of sustainability.

The student will also have acquired generic skills such as

- critical thinking, problem-solving skills,
- teamwork skills and the ability to work in a multidisciplinary team,
- communication skills (oral and written scientific and popularized communication); and
- identification and continuous development of own competences.

The student will be able to apply the knowledge and skills acquired when working as an expert in one of the disciplines of the HNFB programme.

Professional qualifications and competences acquired through the qualification/ produced by the degree

Not relevant in the HNFB programme

Job profiles and sectors of graduates

The education provides in-depth field-specific competence and academic skills as well as a strong identity of an academic expert. Graduates of the Master's programme can work in expert, teaching, research and managerial positions in the public sector, non-governmental organizations and companies, as well as independent entrepreneurs.

Examples of job titles of HNFB graduates include:

- Expert in Nutrition and Food
- Product Manager, Development Manager
- Director of Food Services
- Researcher, Senior Scientist
- Planning Officer
- Senior Inspector
- Senior Teacher or Lecturer at a university of applied sciences
- Growth entrepreneur
- Journalist, Press Officer, Content Provider

Selection of students for a degree programme

Students are admitted to the programme through an international Master's admissions process (so-called winter selection). Application information: Studyinfo: Master of Science in Human Nutrition and Food Behaviour, Master of Philosophy (2 years).

Further study options and opportunities

Students from certain BSc programmes at the University of Helsinki have the option to continue through the registration procedure to the HNFB Master's programme. HNFB has continuation paths from the following BSc programmes:

- Human Nutrition study track: Bachelor's programmes in Food Sciences, Molecular Biosciences and Biology
- Food-related Behaviour study track: Bachelor's programmes in Environmental and Food Economics, Education (Home economics) and Social Sciences

Graduates of the HNFB Master's programme can apply for doctoral studies at the University of Helsinki and other international universities. Suitable doctoral programmes at the University of Helsinki include

- Doctoral Programme in Population Health (DocPop)
- Doctoral Programme in Food Chain and Health (FoodHealth)
- PhD Programme in Integrative Life Sciences (ILS)

- PhD in Social Sciences
- Doctoral Programme in Education, Training, Society and Culture (SEDUCE)
- Doctoral programme on the sustainable use of renewable resources (AGFOREE)

Working life skills

The degree includes 5-10 credits of work-related studies. These studies may include a period of practical training.

Courses integrate working life knowledge and generic expert skills. Some courses are also attended by visiting experts from outside the university. Portfolio work during the studies supports the student in the identification of their own skills and competences, the development as an expert and career planning.

International students (Bachelor's degree completed outside Finland) have the opportunity to participate in the UNITalent mentoring programme

International competence

The multilingual programme offers natural opportunities for internationalisation.

Students are encouraged to explore the possibility of completing part of their studies abroad. Courses taken during student exchange may replace courses that are compulsory in the HNFB programme, or they may be electives in the degree. It is also possible to undertake work related to a Master's thesis abroad. In addition, an internship abroad is a viable option.

The Master's programme provides an excellent understanding of global nutrition, food and consumption issues.

Continuous learning

The degree programme offers the module HNFB-1000 Basics in Nutrition Science (note: teaching is in Finnish) that is open to all students of the University of Helsinki and is also available as open university studies. Other courses may also be offered as open university courses.

Master's studies (including portfolio) support the development of continuous learning skills (e.g. follow-up of research, searching for information, critical thinking).

With the right to pursue non-degree studies, it is possible to take HNFB courses at Master's level if the candidate has sufficient knowledge background

Sustainability skills

The contents of the Master's programme are closely related to many aspects of sustainability. Themes based on the UN's Sustainable Development Goals (Agenda 2030) - such as health and well-being, food security, equality, and ecological and cultural sustainability - are addressed throughout the programme. The aim of the programme is to train experts who recognise sustainability issues and know how to integrate them into nutrition and food-related behaviour frameworks. Graduates of the programme will understand the impact of food system changes on nutrition and public health and will be aware of their responsibilities in the sustainability transition.

Sustainability themes are woven into the objectives and content of relevant courses. Students who have not taken SUST-001 Sustainability Course in their undergraduate studies are recommended to integrate the course with the Optional studies in their Master's degree

Assessment practices

The University of Helsinki's assessment practices are used in the degree programmes.

Subjects of evaluation may be oral presentations, written reports, written examinations, written exams, working exams, essays, homework assignments and learning diaries. Courses may also include assessment of in-class activities such as laboratory work. Assessment may be based on individual or group performance. The assessment methods and criteria are chosen for each course on the basis of the learning objectives. Assessment criteria are available at the beginning of each course.

Procedures for the recognition and validation of competences

The programme follows the general guidelines of the University of Helsinki on the recognition of competences

Graduation procedures and criteria

Information on graduation procedures can be found in the Instructions for students website at https://studies.helsinki.fi/instructions/graduation

Main or subsidiary activity and distance learning

Studying in the programme is Full-time. Studies can be completed in 2 years.

Practices for collecting and processing student feedback

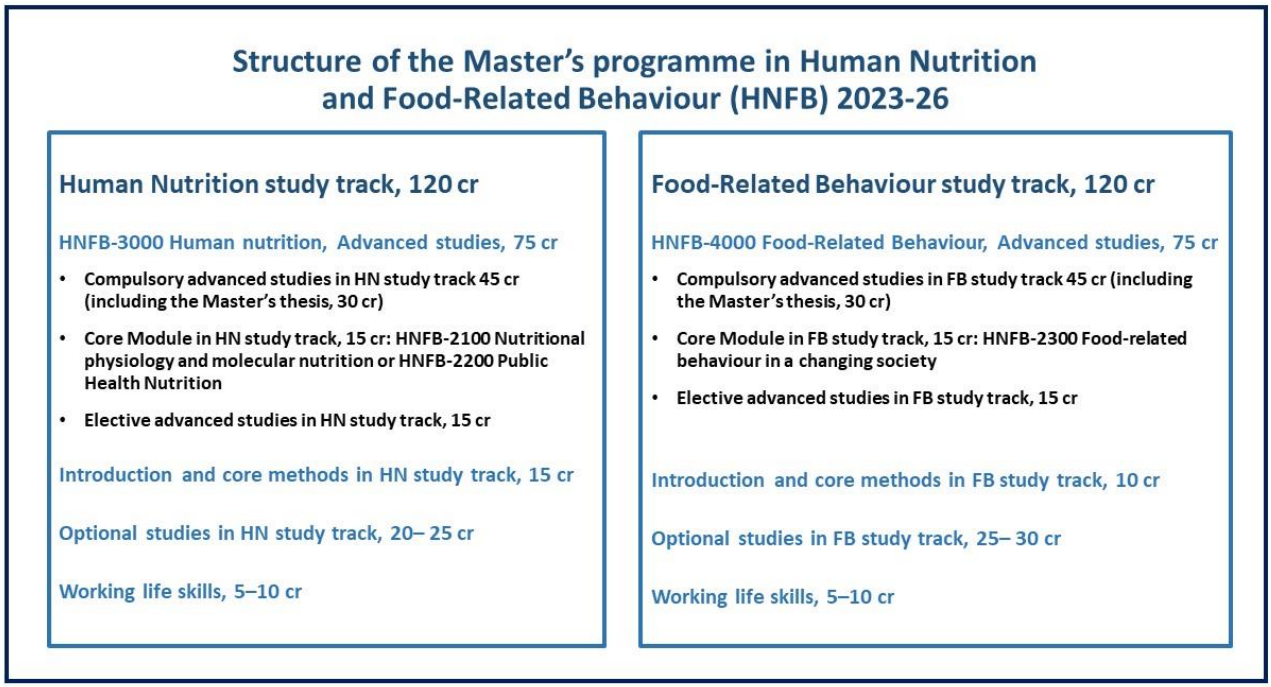
The HowUlearn 3 survey is sent out in the spring of the 1st year to students enrolled in the introductory course HNFB-201 in the first autumn. The survey includes semester feedback. In the final phase of the Master's programme, semester feedback is collected and linked to the course HNFB-207 Master's thesis seminar. Course-specific feedback will be collected by the responsible teachers. Students also have the opportunity to provide anonymous feedback on the programme. An annual event is organised in cooperation with the student association where the previous academic year is reviewed and discussed with the students.

Student guidance

Each student starting the HNFB programme is assigned a tutoring teacher who acts as the personal study plan (PSP) advisor and the student's link to the Master's programme. The tutoring teacher will meet with the students in group and individual meetings.

The Master's thesis has at least one supervisor who supports the student at different stages of the thesis process https://studies.helsinki.fi/instructions/article/thesis-and-maturity-test-masters-and-licentiates-programmes

Structure



Order and timetable of studies

The curriculum has been planned so that it is most feasible to start the studies in the beginning of the Autumn term. Two compulsory courses, HNFB-201 The kaleidoscope of food and human nutrition studies and HNFB-202 Dietary assessment methods, are planned for the first autumn.

For more information on the recommended sequence of studies, please refer to the course descriptions and the programme's study information

Stucture of the HNFB programme 2023-26

HUMAN NUTRITION STUDY TRACK (120 CR)

HNFB-3000 Human nutrition, Advanced studies, 75 cr

Compulsory advanced studies in HN study track, 45 cr

- HNFB-204 Evidence on nutrition and health, 5 cr
- HNFB-205 Advanced literature examination, Human nutrition, 5 cr
- HNFB-207 Master's thesis seminar, 5 cr
- HNFB-208 Master's thesis, Human nutrition and food-related behavior, 30 cr
- VIIKM-001 Master´s maturity test MM, 0 cr

Core Module in HN study track, 15 cr (compulsory)

Complete one of the modules:

HNFB-2100 Nutritional physiology and molecular nutrition, 15 cr

- HNFB-211 Advanced nutritional physiology, 5 cr
- HNFB-212 Diet-related molecular mechanisms of chronic diseases, 5 cr
- HNFB-213 Experimental nutrition research, 5 cr

HNFB-2200 Public Health Nutrition, 15 cr

Choose three courses

- HNFB-221 Nutrition and society, 5 cr
- HNFB-223 Nutritional epidemiology, 5 cr
- HNFB-225 Nutrition and food services, 5 cr
- HNFB-226 Food systems and nutrition in low- and middle-income countries, 5 cr

Elective advanced studies in HN study track, 15 cr

You may complete another HN-module (HNFB-2100 or HNFB-2200), the HNFB-2300 module or 15 cr from the following courses.

- ***HNFB-2100 Nutritional physiology and molecular nutrition, module 15 cr***
- ***HNFB-2200 Public Health Nutrition, module 15 cr***
- ***HNFB-2300 Food-related behaviour in a changing society, module 15 cr***
- HNFB-211 Advanced nutritional physiology, 5 cr
- HNFB-212 Diet-related molecular mechanisms of chronic diseases, 5 cr
- HNFB-213 Experimental nutrition research, 5 cr
- HNFB-221 Nutrition and society, 5 cr
- HNFB-223 Nutritional epidemiology, 5 cr
- HNFB-225 Nutrition and food services, 5 cr
- HNFB-226 Food systems and nutrition in low- and middle-income countries, 5 cr
- HNFB-231 Theoretical and empirical perspectives to food-related behaviour, 5 cr
- EDUM504 Sustainable culinary culture, 5 cr
- SOSM-SP305 Developing behaviour change interventions, 5 cr

- HNFB-240 Development of Scientific expertise, 5 cr
- HNFB-241 Optional Advanced literature examination in Nutritional Physiology, 5 cr
- HNFB-242 Optional Advanced literature examination in Public Health Nutrition, 5 cr
- HNFB-252 Research group internship, 1-5 cr
- HNFB-260 Changing theme course in Human Nutrition and Food-Related Behaviour, 1 - 5 cr
- Other advanced level studies from the field of HNFB (mainly MSc level studies completed in student exchange) as agreed with the teacher responsible for the module HNFB-3000 Human nutrition, Advanced studies.

Introduction and core methods in HN study track, 15 cr

- HNFB-201 The kaleidoscope of food and human nutrition studies, 5 cr
- HNFB-202 Dietary assessment methods, 5 cr
- HNFB-203 Nutritional status assessment, 5 cr

Optional studies in HN study track, complete 20– 25 cr

- Studies that strengthen the essential knowledge base needed for the advanced studies.
- Focus studies: theoretical and methodological courses from other degree programmes at UH or in other universities.
- Other advanced level courses from the HNFB programme (from the list of elective advanced studies or working life skills)
- Language studies
- Courses completed in student exchange
    - VIIKM-201 Study Module Completed in a Foreign University, 15-25 cr
- The optional studies should include at least one methodological course.

You may also choose courses from the following list if you have not completed them in the BSc degree

- HNFB-111 Anatomian ja fysiologian perusteet, 5 cr (in Finnish)
- HNFB-123 Ravitsemushoidon perusteet, 5 cr (in Finnish)
- HNFB-130 Liikunta ja ravitsemus, 5 cr (in Finnish)
- SUST-001 Sustainability course, 3 cr

Working life skills 5–10 cr

Complete 5–10 cr

- HNFB-251 Traineeship, 5 cr
- HNFB-252 Research group internship, 1 - 5 cr
- HNFB-253 Service-Learning, 1 - 5 cr
- HNFB-254 Other discipline-related activities, 1–5 cr
- VIIKM-002 Tutoring MM, 5 cr
- VIIKM-005 Demanding participation in administrative bodies and student organisations, 2 - 5 cr
- other relevant studies (e.g. leadership, entrepreneurship or innovation studies)

FOOD-RELATED BEHAVIOUR STUDY TRACK (120 CR)

HNFB-4000 Food-Related Behaviour, Advanced studies, 75 cr

Compulsory advanced studies in FB study track, 45 cr

- HNFB-204 Evidence on nutrition and health, 5 cr
- HNFB-206 Advanced literature examination, Food-related behaviour, 5 cr
- HNFB-207 Master's thesis seminar, 5 cr
- HNFB-208 Master's thesis, Human nutrition and food-related behavior, 30 cr
- VIIKM-001 Master´s maturity test MM, 0 cr

Core Module in FB study track, 15 cr (compulsory)

Complete the module:

HNFB-2300 Food-related behaviour in a changing society, 15 cr

- HNFB-231 Theoretical and empirical perspectives to food-related behaviour, 5 cr
- EDUM504 Sustainable culinary culture, 5 cr
- SOSM-SP305 Developing behaviour change interventions, 5 cr

Elective advanced studies in FB study track, 15 cr

You may complete the HNFB-2100 or HNFB-2200 module, or 15 cr from the following courses.

- ***HNFB-2100 Nutritional physiology and molecular nutrition, module 15 cr***
- ***HNFB-2200 Public Health Nutrition, module 15 cr***
- HNFB-211 Advanced nutritional physiology, 5 cr
- HNFB-212 Diet-related molecular mechanisms of chronic diseases, 5 cr
- HNFB-213 Experimental nutrition research, 5 cr
- HNFB-221 Nutrition and society, 5 cr
- HNFB-223 Nutritional epidemiology, 5 cr
- HNFB-225 Nutrition and food services, 5 cr
- HNFB-226 Food systems and nutrition in low- and middle-income countries
- HNFB-203 Nutritional status assessment, 5 cr
- HNFB-240 Development of Scientific expertise, 5 cr
- HNFB-241 Optional Advanced literature examination in Nutritional Physiology, 5 cr
- HNFB-242 Optional Advanced literature examination in Public Health Nutrition, 5 cr
- HNFB-252 Research group internship, 1-5 cr
- HNFB-260 Changing theme course in Human Nutrition and Food-Related Behaviour, 1 - 5 cr
- Other advanced level studies from the field of HNFB (mainly MSc level studies completed in student exchange) as agreed with the teacher responsible for the module HNFB-4000 Food-related Behaviour, Advanced studies.

Introduction and core methods in FB study track, 10 cr

- HNFB-201 The kaleidoscope of food and human nutrition studies, 5 cr
- HNFB-202 Dietary assessment methods, 5 cr

Optional studies in FB study track, complete 25 – 30 cr

- Studies that strengthen the essential knowledge base needed for the advanced studies.
- Focus studies: theoretical and methodological courses from other degree programmes at UH or in other universities.

- Other advanced level courses from the HNFB programme (from the list of elective advanced studies or working life skills)
- Language studies
- Courses completed in student exchange
    - **VIIKM-201 Study Module Completed in a Foreign University, 15-25 cr**
- The optional studies should include at least one methodological course.

You may also complete the module HNFB-1000 or choose courses from the following list if you have not completed them in the BSc degree.

- ***HNFB-1000 Ravitsemustieteen perusteet, module 15 - 25 cr***
- HNFB-121 Kansanravitsemus (Public Health Nutrition), 5 cr
- HNFB-122 Elintarvikkeet ruokavalioissa, 5 cr (in Finnish)
- HNFB-112 Ravitsemusfysiologia (Nutritional Physiology), 5 cr
- HNFB-111 Anatomian ja fysiologian perusteet, 5 cr (in Finnish)
- HNFB-123 Ravitsemushoidon perusteet, 5 cr (in Finnish)
- HNFB-130 Liikunta ja ravitsemus, 5 cr (in Finnish)
- SUST-001 Sustainability course, 3 cr

Working life skills 5-10 cr

Choose 5-10 cr

- HNFB-251 Traineeship, 5 cr
- HNFB-252 Research group internship, 1 - 5 cr
- HNFB-253 Service-Learning, 1 - 5 cr
- HNFB-254 Other discipline-related activities, 1–5 cr
- VIIKM-002 Tutoring MM, 5 cr
- VIIKM-005 Demanding participation in administrative bodies and student organisations, 2 - 5 cr
- other relevant studies (e.g. leadership, entrepreneurship or innovation studies)

MODULE DESCRIPTIONS

HNFB-1000 Ravitsemustieteen perusteet

Grunderna i näringslära, Basics in nutrition science

Arviointiasteikko
Asteikko 0–5, opintojaksojen arvosanojen painotettu keskiarvo.

Laajuus, 15 tai 25 op

Vastuuorganisaatiot HNFB

Vastuuhenkilöt Riitta Freese, riitta.freese@helsinki.fi

Sisällön kuvaus
Kokonaisuus koostuu ihmisen ravitsemuksen ja ruokakäyttäytymisen maisteriohjelman (HNFB) tarjoamista kanditason opinnoista, joiden avulla voi opiskella perustiedot ihmisen ravitsemuksesta ja ruokavalioista.

Edeltävät opinnot tai edeltävä osaaminen
Kemian ja biologian vähintään lukiokurssien hallinta on eduksi. Biokemian (esim. MOLE-101) sekä ihmisen anatomian ja fysiologian (esim. HNFB-111) opinnot antavat pohjaa etenkin ravitsemusfysiologian opintojaksolle.

Osaamistavoitteet
Opintokokonaisuuden suorittanut opiskelija osaa perusteet ravitsemustieteen keskeisistä osa-alueista, joita ovat ravitsemusfysiologia, kansanravitsemus ja ruokavaliot.

Kohderyhmät
Vastaava koulutusohjelma: Ihmisen ravitsemuksen ja ruokakäyttäytymisen maisteriohjelma (HNFB). Tarjolla muiden koulutusohjelmien opiskelijoille.
Opintokokonaisuuden ydinkurssien (HNFB-121 Kansanravitsemus, HNFB-122 Elintarvikkeet ruokavalioissa, HNFB-112 Ravitsemusfysiologia) suorittaminen hyvällä menestyksellä (vähintään 3/5) on edellytys HNFB-maisteriohjelman ihmisen ravitsemuksen opintosuuntaan pääsylle (ilmoittautuminen elintarviketieteiden, molekyylibiotieteiden tai biologian kandiohjelmista).
Opintokokonaisuus voidaan toteuttaa erilaisena toteutuksena osana koulutusohjelman jatkuvan oppimisen tarjontaa (avoimet yliopisto-opinnot).

Vanhentuminen
Kokonaisuuteen ei voi sijoittaa yli 10 vanhoja opintoja. Kokonaisuus vanhenee 10 vuodessa sen viimeisenä suoritetun kurssin suorituslukukaudesta laskien.

Opetuskieli suomi

Vastaavuudet muihin opintoihin
AYHNFB-1000 Avoin yo: Ravitsemustieteen perusteet 15 – 25 op

Opintokokonaisuuden taso
kanditaso / EQF-taso 6 , Perus- ja aineopintotaso

Opintokokonaisuuden rakenne

Seuraavista opintojaksoista (á 5 op kokonaisuuteen valitaan kolme (15 op:n kokonaisuus) tai viisi (25 op:n kokonaisuus). Opiskelija voi suorittaa kaikki tarjolla olevat kurssit, mutta vain 15 op tai 25 op sidotaan kokonaisuudeksi.

Ensisijaisesti kokonaisuuteen valitaan nämä 3 kurssia (yhteensä 15 op):

- HNFB-121 Kansanravitsemus, 5 op
- HNFB-122 Elintarvikkeet ruokavalioissa, 5 op
- HNFB-112 Ravitsemusfysiologia, 5 op

Jos joku em. kursseista kuuluu tutkintoon muulla tavoin tai jos haluaa suorittaa 25 op:n kokonaisuuden, valitaan muut kokonaisuuteen tulevat kurssin näiden kurssien joukosta:

- HNFB-111 Anatomian ja fysiologian perusteet, 5 op
- HNFB-123 Ravitsemushoidon perusteet, 5 op
- HNFB-130 Liikunta ja ravitsemus, 5 op

Kokonaisuuteen voi sitoa myös ennen lv 2023-2026 suoritetun kurssin

- HNFB-124 Elintarvikkeiden prosessointi ja ravitsemus, 5 op
- HNFB-141 Nutritional problems in low-income countries, 5 op

HNFB-2100 Nutritional Physiology and Molecular Nutrition

Ravitsemusfysiologia ja molekyyliravitsemus , Näringsfysiologi och molekylär nutrition

Grading scale Weighted average

Credits 15 cr

Responsible organisations HNFB

Responsible persons Anne-Maria Pajari, anne-maria.pajari@helsinki.fi

Content description

- HNFB-211 Advanced nutritional physiology (5 cr)
- HNFB-212 Diet-related molecular mechanisms of chronic diseases (5 cr)
- HNFB-213 Experimental nutrition research (5 cr)

Prerequisites

The student must have taken previous courses on biology, biochemistry, anatomy, physiology, and basic concepts of nutrition. HNFB Master's programme provides perquisite studies in Finnish by following courses:

- HNFB-111 Anatomian ja fysiologian perusteet (Fundamentals of Anatomy and Physiology)
- HNFB-112 Ravitsemusfysiologia (Nutritional Physiology)

Learning outcomes

The module provides the student with an in-depth knowledge of key aspects of nutritional physiology and molecular mechanisms whereby nutrition influences human health. The student will

- learn at molecular level how food intake is regulated, how nutrients are transported, metabolized, and stored and how they contribute to human physiology in short and long-term.
- develop understanding on the molecular and physiological mechanisms leading to the development of chronic, non-communicable diseases in humans, such as obesity, diabetes, coronary heart disease, and cancers.

- be able to explain the mechanisms by which diets, nutrients and phytochemicals contribute to the development or prevention of chronic diseases.
- understand the methods and experimental designs used in nutritional physiology research and evidence obtained from this type of research

Target groups
The module belongs to elective advanced studies for students in Human Nutrition study track in HNFB Master's programme. Available for students from other Master's programmes in UH by agreement.

Term/teaching period when the module will be offered
1st and 2nd year of Master's studies

Recommended time or stage of studies for completion
1st and 2nd year of Master's studies

Expiry of studies
Module and the studies in it expire in 10 years. Module's expire date is calculated from the date of the last completed course.

Language of instruction
In HNFB language of instruction is English or Finnish, completion in the multilingual HNFB programme can be English Finnish or Swedish.

Study module level
HNFB-modules are Master's level studies, second-cycle degree/EQF level 7

Structure of the study module
- HNFB-211 Advanced nutritional physiology (5 cr)
- HNFB-212 Diet-related molecular mechanisms of chronic diseases (5 cr)
- HNFB-213 Experimental nutrition research (5 cr)

HNFB-2200 Public Health Nutrition

Kansanravitsemus, Folkhälsonäring

Grading scale Weighted average

Credits 15 cr

Responsible organisations HNFB

Responsible persons Maijaliisa Erkkola, maijaliisa.erkkola@helsinki.fi

Content description

Choose 15 cr
- HNFB-221 Nutrition and society, 5 cr
- HNFB-223 Nutritional epidemiology, 5 cr
- HNFB-225 Nutrition and food services, 5 cr
- HNFB-226 Food systems and nutrition in low- and middle-income countries, 5 cr

The student may choose any 3 courses from the 4 courses presented in the "module content".

Prerequisites
Recommended preceding courses: HNFB-121 Kansanravitsemus (Public Health Nutrition) and HNFB- 202 Dietary assessment methods.

Learning outcomes
The student will get a thorough understanding on theoretical and practical issues related to understanding nutritional status and needs of population, and how the nutrition-related health can be improved by population based-approaches.

Nutrition and society:

- to get an insight on how population-based health promotion campaigns and programs are planned and evaluated according to the socio-ecological model of health promotion
- to understand what health promotion is from a broad perspective
- to apply the knowledge in making a descriptive plan for a health-promotion program/project

Nutritional epidemiology:

- The student understands the theory and design of epidemiological research settings, critically interprets results from nutritional epidemiological studies and evaluates the evidence on a given exposure and disease.
- The student gets an insight on dietary exposures and their variation, methodological considerations in epidemiological study designs, measurement errors, and adjustment for total energy intake.
- The student is able to conduct and interpret common statistical analyses in nutritional epidemiology.

Food systems and nutrition in low- and middle-income countries

- differentiate the main characteristics and determinants of food security and nutrition status in low- and middle-income countries (LMICs)
- describe the most important methods to monitor food security, safety and nutrition in LMIC's
- analyze existing data on the food security and nutritional situation in a LMIC
- prioritize policies related to food systems and nutrition to improve the situation in the country
- describe typical food systems in LMICs and the challenges they pose for food and nutrition security and food safety.

Nutrition and food services

- understand the role of food services in public health nutrition and in health promotion
- can design sustainability and health interventions within the food service sector
- can apply nutritional recommendations in food services
- understand the role of nutritional expertise in food services

Target groups
The module is elective for students in HNFB Master's program. Students from other Master's programs can participate.

Term/teaching period when the module will be offered
1st and 2nd year of Master's studies

Recommended time or stage of studies for completion
1st and 2nd year of Master's studies

Expiry of studies

Module and the studies in it expire in 10 years. Module's expire date is calculated from the date of the last completed course.

Language of instruction
In HNFB language of instruction is English or Finnish, completion in the multilingual HNFB programme can be English Finnish or Swedish.

Study module level
Master's level studies, second-cycle degree/EQF level 7

HNFB-2300 Food-related behaviour in a changing society

Ruokakäyttäytyminen muuttuvassa yhteiskunnassa, Matbeteende i ett växlande samhälle

Grading scale Weighted average of courses

Credits 15 cr

Responsible organisations HNFB

Responsible person Taru Lindblom, taru.lindblom@helsinki.fi

Content description

- HNFB-231: Theoretical and empirical perspectives to food-related behavior, 5 cr
- EDUM504: Sustainable culinary culture, 5 cr
- SOSM-SP305: Developing behaviour change interventions, 5 cr

Prerequisites
HNFB-201 The kaleidoscope of food and human nutrition studies

Learning outcomes
In this module, the student will get an understanding of social scientific approaches and research designs to food and eating, behaviour change interventions, and sustainability issues related to food consumption and culinary culture. They will be able to analyze and interpret the food- and eating-related social phenomena and practices and behaviour interventions and apply the learned perspectives in their own research.
The course-related learning outcomes are presented in each individual course's details.

Target groups
The module is compulsory for students in Food related behaviour study track HNFB Master's programme and elective for other students in HNFB Master's programme. Individual courses are included in other programmes (see course specific details). Students from other programmes can participate in the courses of the module if there is room.

Term/teaching period when the module will be offered
1st and 2nd year of Master's studies

Recommended time or stage of studies for completion
From 1st year autumn to 2nd year spring

Expiry of studies

Module and the studies it contains expire in 10 years. Module's expire date is calculated from the date of the last completed course.

Language of instruction
In HNFB language of instruction is English or Finnish, completion in the multilingual HNFB programme can be English Finnish or Swedish.

Study module level
Master's level studies, second-cycle degree/EQF level 7

Structure of the study module
- HNFB-231: Theoretical and empirical perspectives to food-related behavior, 5 cr
- EDUM504: Sustainable culinary culture, 5 cr
- SOSM-SP305: Developing behaviour change interventions, 5 cr

It is recommended that HNFB-231 is completed before EDUM504 and that HNFB-221 is completed before SOSM-SP304.

HNFB-3000 Human nutrition, advanced studies

Ihmisen ravitsemus, syventävät opinnot, Human nutrition, fördjupade studier

Grading scale Weighted average

Credits 75 cr

Responsible organisations HNFB

Responsible persons Mikael Fogelholm, mikael.fogelholm@helsinki.fi

Content description
- HNFB-208 Master's thesis, Human nutrition and food-related behavior, 30 cr
- HNFB-207 Master's thesis seminar (5 cr)
- HNFB-205 Advanced literature examination, Human nutrition (5 cr)
- HNFB-204 Evidence on nutrition and health (5 cr)
- HNFB-2100 Nutritional physiology and molecular nutrition (optional core module) (15 cr) or
- HNFB-2200 Public Health Nutrition (optional core module) (15 cr)
- Elective advanced studies: Another HNFB core module or separate advanced HNFB-courses (15 cr)

Prerequisites
Bachelor's degree in relevant field. There may be also course-specific prerequisites.

Learning outcomes
After completing the advanced studies the student is able to plan and perform research work and work as an expert of Human Nutrition and has acquired the generic abilities:
- critical thinking and reasoning between conflicting views
- dialogue, communication and argumentation skills
- solution seeking and problem solving abilities
- co-operational capacities, group working skills abilities to work in multidisciplinary contexts

Target groups

The module is compulsory for students in HNFB Master's program, Human nutrition study track.

Term/teaching period when the module will be offered
Autumn to spring

Recommended time or stage of studies for completion
1st year autumn to 2nd year spring

Expiry of studies
Module and the studies in it expire in 10 years. Module's expire date is calculated from the date of the last completed course.

Language of instruction
In HNFB language of instruction is English or Finnish, completion in the multilingual HNFB programme can be English Finnish or Swedish.

Study module level Master's level studies, second-cycle degree/EQF level 7

Structure of the study module
Compulsory studies

- HNFB-208 Master's thesis, Human nutrition and food-related behavior, 30 cr
- HNFB-207 Master's thesis seminar (5 cr)
- HNFB-205 Advanced literature examination, Human nutrition (5 cr)
- HNFB-204 Evidence on nutrition and health (5 cr)

Optional core module (15 cr):

- HNFB-2100 Nutritional physiology and molecular nutrition (15 cr)
- HNFB-2200 Kansanravitsemus (Public Health Nutrition) (15 cr)

Elective advanced studies (15 cr)
Choose 15 cr from the following courses. You may also complete another HN-module (HNFB-2100 or HNFB-2200) or the HNFB-2300 module.

- HNFB-211 Advanced nutritional physiology, 5 cr
- HNFB-212 Diet-related molecular mechanisms of chronic diseases, 5 cr
- HNFB-213 Experimental nutrition research, 5 cr
- HNFB-221 Nutrition and society, 5 cr
- HNFB-223 Nutritional epidemiology, 5 cr
- HNFB-225 Nutrition and food services, 5 cr
- HNFB-226 Food systems and nutrition in low- and middle-income countries
- HNFB-231 Theoretical and empirical perspectives to food-related behaviour, 5 cr
- EDUM504 Sustainable culinary culture, 5 cr
- SOSM-SP305 Developing behaviour change interventions, 5 cr
- HNFB-240 Development of Scientific expertise, 5 cr
- HNFB-241 Optional Advanced literature in Nutritional Physiology, 5 cr
- HNFB-242 Optional Advanced literature in Public Health Nutrition, 5 cr
- HNFB-252 Research group internship, 1-5 cr
- HNFB-260 Changing theme course in Human Nutrition and Food-Related Behaviour, 1 - 5 cr
- Other advanced-level studies from the field of HNFB (mainly MSc level studies completed in student exchange) as agreed with the teacher reponsive for the module HNFB-3000 Human nutrition, Advanced studies.
- HNFB-2100 Nutritional physiology and molecular nutrition, module 15 cr

- HNFB-2200 Public Health Nutrition, module 15 cr
- HNFB-2300 Food-related behaviour in a changing society, module 15 cr

HNFB-4000 Food-related behaviour, advanced studies

Ruokakäyttäytyminen, syventävät opinnot, Matbeteende, fördjupade studier

Grading scale Weighted average of courses

Credits 75 cr

Responsible organisations HNFB

Responsible person Taru Lindblom, taru.lindblom@helsinki.fi

Content description

- HNFB-208 Master's thesis, Human nutrition and food-related behavior, 30 cr
- HNFB-207 Master's thesis seminar (5 cr)
- HNFB-206 Advanced literature examination, Food-related behaviour (5 cr)
- HNFB-204 Evidence on nutrition and health (5 cr)
- HNFB-2300 Food-related Behaviour in a Changing Society (core module) (15 cr)
- Elective advanced studies: Another HNFB core module or separate advanced HNFB-courses (15 cr) or separate field-related advanced studies (to be agreed separately with responsible professor)

Prerequisites

Bachelor's degree in relevant field. There may be also course-specific prerequisites

Learning outcomes

After completing the advanced studies the student has academic skills relating to the field of food-related behaviour and is able to plan and perform research work and work as an expert within the field of food-related behaviour. The student has also acquired the generic abilities:

- critical thinking and reasoning between conflicting views dialogue
- communication and argumentation skills
- solution seeking and problem solving abilities
- co-operational capacities, group working skills
- abilities to work in multidisciplinary contexts

Target groups

The module is compulsory for students in HNFB Master's programme, Food related behaviour study track. Some courses are open to students from other programmes, see individual course details.

Term/teaching period when the module will be offered

From 1st year autumn to 2nd year spring; see individual courses' schedule

Recommended time or stage of studies for completion

From 1st year autumn to 2nd year spring

Expiry of studies

Module and the studies it contains expire in 10 years. Module's expire date is calculated from the date of the last completed course.

Language of instruction
In HNFB language of instruction is English or Finnish, completion in the multilingual HNFB programme can be English Finnish or Swedish.

Study module level
HNFB-modules are Master's level studies, second-cycle degree/EQF level 7

Structure of the study module
Compulsory studies

- HNFB-208 Master's thesis, Human nutrition and food-related behavior, 30 cr
- HNFB-207 Master's thesis seminar (5 cr)
- HNFB-206 Advanced literature examination, Food-related behaviour (5 cr)
- HNFB-204 Evidence on nutrition and health (5 cr)
- HNFB-2300 Food-related Behaviour in a Changing Society (core module) (15 cr)

Elective advanced studies (15 cr)
Choose 15 cr from the following courses. You may also complete the HNFB-2100 or HNFB-2200 module. It is also possible to include separate field-related advanced studies (to be agreed separately with responsible professor)

- HNFB-203 Nutritional status assessment, 5 cr
- HNFB-211 Advanced nutritional physiology, 5 cr
- HNFB-212 Diet-related molecular mechanisms of chronic diseases, 5 cr
- HNFB-213 Experimental nutrition research, 5 cr
- HNFB-221 Nutrition and society, 5 cr
- HNFB-223 Nutritional epidemiology, 5 cr
- HNFB-225 Nutrition and food services, 5 cr
- HNFB-226 Food systems and nutrition in low- and middle-income countries
- HNFB-240 Development of Scientific expertise, 5 cr
- HNFB-241 Optional Advanced literature in Nutritional Physiology, 5 cr
- HNFB-242 Optional Advanced literature in Public Health Nutrition, 5 cr
- HNFB-252 Research group internship, 1-5 cr
- HNFB-260 Changing theme course in Human Nutrition and Food-Related Behaviour, 1 - 5 cr
- Other field-related advanced studies (to be agreed separately with the teacher reponsive for the module HNFB-4000 Food-related Behaviour, Advanced studies)
- HNFB-2100 Nutritional physiology and molecular nutrition, module 15 cr
- HNFB-2200 Public Health Nutrition, module 15 cr

COURSE DESCRIPTIONS

HNFB-111 Anatomian ja fysiologian perusteet

Grunderna i anatomi och fysiologi, Basics of anatomy and physiology

Laajuus 5 op

Vastuuorganisaatiot HNFB

Vastuuhenkilöt Eeva Voutilainen, eeva.voutilainen@helsinki.fi

Vastaavuudet muihin opintoihin
HNFB-111 Anatomian ja fysiologian perusteet,

Edeltävät opinnot tai edeltävä osaaminen
-

Osaamistavoitteet
Opintojakson suoritettuaan opiskelija osaa:

- tunnistaa ja nimetä nisäkkään, erityisesti ihmisen elimistön perusrakenteet
- selittää anatomian ja fysiologian peruskäsitteet ja -ilmiöt
- kuvata keskeiset elinjärjestelmät ja niiden toiminnan perusteet
- selittää elimistön toimintojen ja niiden säätelyn pääpiirteet
- yhdistää keskeisten elintoimintojen merkityksen terveyden ylläpitoon

Asiasisältö
Anatomian ja fysiologian peruskäsitteet, peruskudokset, elinjärjestelmät ja niiden toiminta, elimistön toiminnan hermostollinen ja hormonaalinen säätely, elimistön energia-aineenvaihdunnan perusteet, elämänkaari, kronobiologia.

Suoritustavat
Pääosin verkkokurssi, joka suoritetaan verkkotenttinä

Arviointiasteikko 0-5

Arviointimenetelmät ja -kriteerit
Verkkotentin arviointi arvosanoilla 0-5; huolella tehdyt vapaaehtoiset tehtävät voivat korottaa arvosanaa

Oppimista tukevat aktiviteetit ja menetelmät

- Verkkoluennot
- Vapaaehtoiset oppimistehtävät
- Videoklippejä, joissa itseopiskelutehtäviä
- Verkkotentti

Kohderyhmät
Kurssi on pakollinen farmasian opiskelijoille (1. vuosikurssi). Kurssi on avoin kaikille HY:n tutkinto-opiskelijoille ja avoimia yliopisto-opintoja suorittaville opiskelijoille.

Järjestämisajankohta opetusperiodin tarkkuudella

Periodi I-II (uusintatentit periodi III)

Suositeltava suoritusajankohta tai -vaihe
Kandiopintojen 1. tai 2. vuosi

Opintokokonaisuus
HNFB-1000 Ravitsemustieteen perusteet

Mahdolliset opetuskielet Suomi

Mahdolliset suorituskielet Suomi, ruotsi

Kirjallisuus ja oppimateriaali

- Leppäluoto J, Rintamäki H, Vakkuri O ym. Anatomia ja fysiologia. Rakenteesta toimintaan. 9. uudistettu painos. SanomaPro 2019 tai uudempi, soveltuvin osin
- Luentomateriaali ja opintojaksolla osoitettu muu materiaali Moodlessa

Syventävä kirjallisuus

- Martini F, Nath JL, Bartholomew EF. Fundamentals of Anatomy & Physiology, 11th ed. Pearson. 2018 tai uudempi, soveltuvin osin.
- Silverthorn DU. Human Physiology, an integrated approach. 8th ed. Pearson 2019 tai uudempi, soveltuvin osin.

Opintojakson taso kanditaso = alempi korkeakoulututkinto / EQF-taso 6, perusopintoja

HNFB-112 Ravitsemusfysiologia

Näringsfysiologi, Nutritional physiology

Laajuus 5 op

Vastuuorganisaatiot HNFB

Vastuuhenkilöt Riitta Freese, riitta.freese@helsinki.fi

Vastaavuudet muihin opintoihin

- AYHNFB-112 Avoin yo: Ravitsemusfysiologia, 5 op
- 882061 Ravitsemusfysiologian perusteet RAV112, 5 op

Edeltävät opinnot tai edeltävä osaaminen:
Vähintään lukion biologia ja kemia. Suositeltavia edeltäviä kursseja ovat biokemian sekä ihmisen anatomian ja fysiologian perusteet.

Osaamistavoitteet
Opintojakson käytyään opiskelija osaa:

- selittää ravitsemusfysiologian keskeiset ilmiöt (ruoansulatus, imeytyminen, kuljetus, varastointi, aineenvaihdunta ja eritys, tarve ja ravitsemustila, hyväksikäyttö, puutos, toksisuus)
- selittää energia-aineenvaihdunnan sekä energiaravintoaineiden, vitamiinien ja kivennäisaineiden käsittelyn perustapahtumat ja kuvailla eri ravintoaineiden tehtäviä elimistössä
- soveltaa edellä mainittuja tietoja erilaisiin tilanteisiin

- hahmottaa kuidun ja ravinnon sisältämien bioaktiivisten aineiden merkitystä elimistössä tunnistaa joidenkin ajankohtaisten ilmiöiden taustoja

Asiasisältö
- ravitsemusfysiologian kannalta keskeiset elimistön rakenteet ja fysiologiset ilmiöt sekä ravitsemusfysiologian peruskäsitteet
- energiaravintoaineiden, vitamiinien ja kivennäisaineiden ruoansulatus, imeytyminen, kuljetus, varastointi, aineenvaihdunta ja eritys sekä tehtävät elimistössä
- energia-aineenvaihdunnan perusteet
- ravinnon muiden aineiden merkitys elimistölle

Suoritustavat
Lähiopetus 40 h, itsenäinen opiskelu 94 h. Ei läsnäolopakkoa. Suoritus: mahdolliset oppimistehtävät ja kirjallinen tentti.
Kurssi voidaan toteuttaa myös verkko-opetuksena osana jatkuvan oppimisen tarjontaa (avoin yliopisto-opetus).

Arviointiasteikko Arvioidaan asteikolla 0–5.

Arviointimenetelmät ja -kriteerit
Arvosteluperusteet nähtävillä kurssin Moodle-alueella.

Oppimista tukevat aktiviteetit ja menetelmät
Aktiivinen osallistuminen kontaktiopetukseen, oppimistehtävät, oppikirjan lukeminen

Kohderyhmät
Vaihtoehtoinen elintarviketieteiden, molekyylibiotieteiden ja kasvatustieteiden (kotitalousopettaja) kandiohjelmissa. Yksi kolmesta kriteerikurssista Ihmisen ravitsemuksen ja ruokakäyttäytymisen maisteriohjelman ihmisen ravitsemuksen -opintosuuntaan ilmoittautuville. Pakollinen kokonaisuudessa HNFB-1000 Ravitsemustieteen perusteet.
Kurssi voidaan järjestää myös Avoimen yliopiston/jatkuvan oppimisen opiskelijoille.
Students in the HNFB Master's programme may complete the course in English (literature exam).

Järjestämisajankohta opetusperiodin tarkkuudella
Kevätlukukausi, periodit IIIandIV

Suositeltava suoritusajankohta tai -vaihe
Kandidaattiopinnot 2. tai 3. vuosi.
Elintarviketieteiden, molekyylibiotieteiden tai biologian kandiohjelmista ihmisen ravitsemuksen ja ruokakäyttäytymisen maisteriohjelman (HNFB) ihmisen ravitsemuksen (HN) opintosuuntaan ilmoittautumisen kautta tulevilla kurssia ei voida sitoa maisterin tutkintoon, joten se suositellaan sidottavaksi muiden kriteerikurssien (HNFB-121 Kansanravitsemus ja HNFB-122 Elintarvikkeet ruokavalioissa) ohella kandidaatin tutkintoon.
Ravitsemusfysiologian osaamista voi opintojakson Ravitsemusfysiologia jälkeen kehittää kurssilla HNFB-221 Advanced nutritional physiology.

Opintokokonaisuus
Kurssi kuuluu pakollisena opintokokonaisuuteen HNFB-1000 Ravitsemustieteen perusteet. Kurssi on vaihtoehtoinen opintokokonaisuuksissa ETK-001 Elintarviketieteiden kandiohjelman perusopinnot, MOLE-230 Toimiva yksilö ja EDUK500 Kotitaloustieteen perusopinnot.

Vanhentuminen
Normaali 10 vuoden vanhentumissääntö voimassa.

Mahdolliset opetuskielet suomi

Mahdolliset suorituskielet Suomi.
Students in the HNFB Master's programme may complete the course as a literature exam in English.

Kirjallisuus ja oppimateriaali

- Mutanen M, Niinikoski H, Schwab U, Uusitupa M (toim.) Ravitsemustiede. 8., uudistettu painos. Helsinki, Duodecim; 2021 (soveltuvin osin)
- Mahdollista muuta kirjallisuutta osoituksen mukaan.

Vaihtoehtoisesti esim.

- Lanham-New SA, Hill TR, Gallagher AM, Vorster HH. Introduction to Human Nutrition. 3rd ed. John Wiley & Sons, 2019 (soveltuvin osin) tai
- Mann J, Truswell AS. Essentials of Human Nutrition. 2nd ed. Oxford, Oxford University Press, 2002 (soveltuvin osin)

Opintojakson taso EQF-taso 6 , Aineopinnot

HNFB-121 Kansanravitsemus

Folkhälsonäring, Public Health Nutrition

Laajuus 5 op

Vastuuorganisaatiot HNFB

Vastuuhenkilöt
Mikael Fogelholm, mikael.fogelholm@helsinki.fi
Noora Kanerva, noora.kanerva@helsinki.fi

Vastaavuudet muihin opintoihin

- AYHNFB-121 Avoin yo: Kansanravitsemus 5.0 cr
- 882059 Kansanravitsemus RAV101 5.0 cr

Edeltävät opinnot tai edeltävä osaaminen: Ei ehdottomia esitietovaatimuksia.

Suositeltavat valinnaiset opinnot:
Opintojaksot HNFB-121 Kansanravitsemus, HNFB-112 Ravitsemusfysiologia ja HNFB-122 Elintarvikkeet ruokavalioissa tarjoavat perustiedot ravitsemustieteen keskeisistä osa-alueista. Kansanravitsemuksen opintojakso antaa pohjaa erityisesti niille Ihmisen ravitsemus ja ruokakäyttäytyminen - maisteriohjelman opintojaksoille, joissa pureudutaan ravinnon ja terveyden välisiin yhteyksiin ja terveyden edistämiseen yhteiskunnassa.

Osaamistavoitteet
Opintojakson käytyään opiskelija osaa:

- kuvata ravitsemustieteen ja ruoankäytön historiaa
- hahmottaa yksilöiden ja yhteisöjen ruoankäyttöön vaikuttavia tekijöitä
- selittää suomalaisten ruoankäyttöä, ravinnonsaantia ja ravitsemushaasteita elämänvaiheittain
- kuvata ravitsemustieteen tutkimusasetelmat ja niistä kertyvän tiedon tason

- perustella eri ikäryhmien ja urheilijoiden ravitsemussuositusten pääpiirteet
- kuvata yleisesti ravinnon merkityksen terveydelle elämän eri vaiheissa.

Asiasisältö
- ravitsemustieteen historia
- ruoankäytön historia
- ruoankäyttöön vaikuttavat tekijät
- ravitsemussuositukset
- ravitsemustieteen tutkimusasetelmat
- elämänvaiheravitsemus: ruoankäyttö, ravinnonsaanti ja ravintoon liittyvät sairaudet
- urheilu ja ravitsemus

Suoritustavat
Lähiopetus 56 h, itsenäinen opiskelu 78 h. Ei läsnäolopakkoa.
Mahdolliset oppimistehtävät, esitentti verkossa (Moodle) ja kirjallinen loppukuulustelu.
Kurssi voidaan toteuttaa myös verkko-opetuksena osana jatkuvan oppimisen tarjontaa (avoin yliopisto-opetus).

Arviointiasteikko 0–5

Arviointimenetelmät ja -kriteerit
Nettitentin (1/3) ja loppukuulustelun (2/3) yhteisarvio. Oppimistehtävillä on mahdollista korottaa arvosanaa. Arvosteluperusteet nähtävillä kurssin Moodle-alueella.

Oppimista tukevat aktiviteetit ja menetelmät
Aktiivinen osallistuminen kontaktiopetukseen, oppimistehtävät.

Kohderyhmät
Vaihtoehtoinen elintarviketieteiden kandiohjelmissa, yksi kolmesta kriteerikurssista Ihmisen ravitsemuksen ja ruokakäyttäytymisen maisteriohjelman ihmisen ravitsemuksen -opintosuuntaan ilmoittautuville, pakollinen kokonaisuudessa HNFB-1000 Ravitsemustieteen perusteet. Terveydenhuollon kehittämisen maisteriohjelman opiskelijat.

Kurssi voidaan järjestää myös Avoimen yliopiston/jatkuvan oppimisen opiskelijoille.
Students in the HNFB Master's programme may complete the course in English (literature exam).

Järjestämisajankohta opetusperiodin tarkkuudella
Syyslukukausi, periodit I-II

Suositeltava suoritusajankohta tai -vaihe
Elintarviketieteiden, molekyylibiotieteiden tai biologian kandiohjelmista ihmisen ravitsemuksen ja ruokakäyttäytymisen maisteriohjelman (HNFB) ihmisen ravitsemuksen (HN) opintosuuntaan ilmoittautumisen kautta tulevilla kurssia ei voida sitoa maisterin tutkintoon, joten se suositellaan sidottavaksi muiden kriteerikurssien (HNFB-121 Kansanravitsemus ja HNFB-122 Elintarvikkeet ruokavalioissa) ohella kandidaatin tutkintoon.

Opintokokonaisuus
Kurssi kuuluu pakollisena opintokokonaisuuteen HNFB-1000 Ravitsemustieteen perusteet. Kurssi on vaihtoehtoinen opintokokonaisuudessa ETK-001 Elintarviketieteiden kandiohjelman perusopinnot. Opintojakso kuuluu Terveydenhuollon kehittämisen maisteriohjelman Väestön terveys -opintokokonaisuuteen.

Vanhentuminen
Normaali 10 vuoden vanhentumissääntö voimassa.

Mahdolliset opetuskielet suomi

Mahdolliset suorituskielet suomi, Englanti (examination)

Kirjallisuus ja oppimateriaali

- Mutanen M, Niinikoski H, Schwab U, Uusitupa M (toim.) Ravitsemustiede. 8., uudistettu painos. Helsinki, Duodecim; 2021 (soveltuvin osin)
- Langley-Evans S. Nutrition, health and disease: A lifespan approach. 3rd ed., Oxford: Wiley, 2021 (soveltuvin osin)
- Suomalaiset ravitsemussuositukset: https://www.ruokavirasto.fi/teemat/terveytta-edistava-ruokavalio/ravitsemus--ja-ruokasuositukset/
- Muuta kirjallisuutta osoituksen mukaan.

Opintojakson taso EQF-taso 6, aineopinnot

HNFB-122 Elintarvikkeet ruokavalioissa

Foods in different diets , Livsmedel i olika koster

Laajuus 5 op

Vastuuorganisaatiot HNFB

Vastuuhenkilöt Liisa Korkalo, liisa.korkalo@helsinki.fi

Vastaavuudet muihin opintoihin

- AYHNFB-122 Avoin yo: Elintarvikkeet ruokavalioissa, 5.0 cr,
- RAV131 Elintarvikkeet ruokavaliossa, 5 cr

Edeltävät opinnot tai edeltävä osaaminen:
-

Suositeltavat valinnaiset opinnot:
On suositeltavaa, että opiskelija on suorittanut opintojakson HNFB-121 Kansanravitsemus ennen kurssille osallistumista tai suorittaa sitä samaan aikaan tämän kurssin kanssa.

Osaamistavoitteet
Tavoitteena on, että opintojakson käytyään opiskelija:

- osaa käyttää ravintolaskentaohjelmaa
- osaa arvioida ruokavalioiden ja elintarvikkeiden ravintosisältöjä
- osaa arvioida eri ruoka-aineiden merkitystä ruokavaliossa
- osaa arvioida ruokavaliomuutosten merkitystä ravintoaineiden saannissa
- tuntee eri väestöryhmien ruokavalioiden peruskysymykset

Asiasisältö

- Elintarvikkeiden tuntemus, ravintoainesisältö, merkitys ruokavaliossa eri elämänvaiheissa

- Ruokavalioiden perusteet, suunnittelu ja ravintosisältö
- Ravintolaskentaohjelman käyttö

Suoritustavat
Osallistuminen opetukseen (luennot, ryhmätyö, oppimistehtävä, tentti). Opintojaksoon kuuluu pakollisia lähitapaamisia ja sitä ei voi suorittaa kokonaan etäopiskeluna.
Kurssi voidaan toteuttaa myös verkko-opetuksena osana jatkuvan oppimisen tarjontaa. Verkko-opetuksessa suoritustavat poikkeavat tässä esitetystä.

Arviointiasteikko Arvioidaan asteikolla 1-5.

Arviointimenetelmät ja -kriteerit Arvosteluperusteet nähtävillä kurssin Moodle-alueella.

Oppimista tukevat aktiviteetit ja menetelmät
Aktiivinen osallistuminen lähiopetukseen, oppimistehtävän ja ryhmätyön laatiminen sovitussa aikataulussa.

Kohderyhmät
Yksi kolmesta kriteerikurssista Ihmisen ravitsemuksen ja ruokakäyttäytymisen maisteriohjelman ihmisen ravitsemuksen -opintosuuntaan ilmoittautuville, pakollinen kokonaisuudessa HNFB-1000 Ravitsemustieteen perusteet.
Kurssi voidaan järjestää myös Avoimen yliopiston/jatkuvan oppimisen opiskelijoille.

Järjestämisajankohta opetusperiodin tarkkuudella
Syyslukukausi, I-II periodit

Suositeltava suoritusajankohta tai -vaihe
Elintarviketieteiden, molekyylibiotieteiden tai biologian kandiohjelmista ihmisen ravitsemuksen ja ruokakäyttäytymisen maisteriohjelman (HNFB) ihmisen ravitsemuksen (HN) opintosuuntaan ilmoittautumisen kautta tulevilla kurssia ei voida sitoa maisterin tutkintoon, joten se suositellaan sidottavaksi muiden kriteerikurssien (HNFB-121 Kansanravitsemus ja HNFB-122 Elintarvikkeet ruokavalioissa) ohella kandidaatin tutkintoon.

Opintokokonaisuus
Kurssi kuuluu pakollisena opintokokonaisuuteen HNFB-1000 Ravitsemustieteen perusteet.

Vanhentuminen
Normaali 10 vuoden vanhentumissääntö voimassa.

Mahdolliset opetuskielet suomi

Mahdolliset suorituskielet Suomi, ruotsi

Kirjallisuus ja oppimateriaali
Luentomateriaali ja opintojaksolla osoitettu muu materiaali Moodlessa

Opintojakson taso
EQF-taso 6, Aineopinnot

HNFB-123 Ravitsemushoidon perusteet

Basics of nutrition care, Grunderna i näringsvård

Laajuus 5 op

Vastuuorganisaatiot HNFB

Vastuuhenkilöt Liisa Korkalo, liisa.korkalo@helsinki.fi

Vastaavuudet muihin opintoihin
AYHNFB-123 Avoin yo: Erityisruokavaliot 5.0 cr

Edeltävät opinnot tai edeltävä osaaminen:
Kansanravitsemus (HNFB-121), Ravitsemusfysiologia (HNFB-112), Elintarvikkeet ruokavalioissa (HNFB-122) tai vastaavat tiedot

Suositeltavat valinnaiset opinnot:
Opintojaksot HNFB-121 Kansanravitsemus, HNFB-112 Ravitsemusfysiologia ja HNFB-122 Elintarvikkeet ruokavalioissa tarjoavat perustiedot ravitsemustieteen keskeisistä osa-alueista.

Osaamistavoitteet
Opintojakson suoritettuaan opiskelija -tuntee keskeiset ravitsemushoitoa vaativat sairaudet ja ravitsemushoidon perusteet. Hän tuntee ruokavaliosuunnittelun perusteet ravitsemushoitoa vaativissa sairauksissa.

Asiasisältö
- Ravintoanamneesi
- Ravitsemushoidon perusteet (mm. lihavuus, dyslipidemiat, kohonnut verenpaine, diabetes, vajaaravitsemus, maha-suolikanavan sairaudet, munuaissairaudet, kihti, ruoka-allergiat ja syömishäiriöt)

Suoritustavat
Osallistuminen opetukseen, oppimistehtävät ja tentti. Läsnäolo luennoilla ei ole pakollista. Kurssi voidaan toteuttaa myös verkko-opetuksena osana jatkuvan oppimisen tarjontaa. Verkko-opetuksessa suoritustavat poikkeavat tässä esitetystä.

Arviointiasteikko Arvioidaan yleisellä asteikolla 1-5.

Arviointimenetelmät ja -kriteerit
Arvosteluperusteet nähtävillä kurssin Moodle-alueella.

Oppimista tukevat aktiviteetit ja menetelmät
Aktiivinen osallistuminen lähiopetukseen, oppimistehtävien laatiminen sovitussa aikataulussa.

Kohderyhmät
Vaihtoehtoinen kokonaisuudessa HNFB-1000 Ravitsemustieteen perusteet
Kurssi voidaan järjestää myös Avoimen yliopiston/jatkuvan oppimisen opiskelijoille.

Järjestämisajankohta opetusperiodin tarkkuudella
Kevätlukukausi, III - IV periodit

Suositeltava suoritusajankohta tai -vaihe -

Opintokokonaisuus
Kurssi on valinnainen opintokokonaisuudessa HNFB-1000 Ravitsemustieteen perusteet.

Vanhentuminen
Normaali 10 vuoden vanhenemisääntö

Mahdolliset opetuskielet suomi

Mahdolliset suorituskielet Suomi, ruotsi

Kirjallisuus ja oppimateriaali
Luentomateriaali ja opintojaksolla osoitettu muu materiaali Moodlessa.

Opintojakson taso
EQF-taso 6, Aineopinnot

HNFB-130 Liikunta ja ravitsemus

Fysisk aktivitet och kost, Nutrition and physical activity

Laajuus 5 op

Vastuuorganisaatiot HNFB

Vastuuhenkilöt Eeva Voutilainen, eeva.voutilainen@helsinki.fi

Vastaavuudet muihin opintoihin AY930001 Liikunta ja ravitsemus (5 op)

Edeltävät opinnot tai edeltävä osaaminen
Ei edellytetä aiempia opintoja. Suositeltavia edeltäviä kursseja ovat Elintarvikkeet ruokavalioissa (HNFB-122, 5 op), Ravitsemusfysiologia (HNFB-112, 5 op), ja Kansanravitsemus (HNFB-121, 5 op)

Osaamistavoitteet
Opintojakson käytyään opiskelija osaa

- esittää periaatteet terveyttä edistävästä liikunnasta ja liikunnan terveysvaikutuksista
- kuvata liikunnan ja kilpaurheilun aiheuttamia aineenvaihdunnallisia muutoksia ja niiden merkitystä ravintoaineiden tarpeeseen
- arvioida ravitsemuksen ja liikunnan yhteisiä terveysvaikutuksia
- kertoa ravitsemuksen merkityksestä fyysiselle suorituskyvylle ja tämän avulla arvioida, miten ruoalla/ravintoainelisillä mahdollisesti voidaan vaikuttaa urheilijoiden suoritukseen

Kuvaus opintojakson sisällöstä:

- terveys- ja kuntoliikunnan suositukset eri ikäryhmille
- urheilijan ravitsemussuositusten laadinnan periaatteet
- liikunnan ja ravitsemuksen erilliset ja yhteiset vaikutukset energia-aineenvaihduntaan
- energiantarpeen arviointi
- liikunnan vaikutus ravinnontarpeeseen
- syömisen ja juomisen vaikutus urheilijalle ennen urheilusuoritusta, sen aikana ja palautumisessa
- ravintolisien merkitys urheilijan fyysiseen suorituskykyyn
- liikunnan ja ravitsemuksen yhteisvaikutukset terveyteen

Suoritustavat

Kurssin voi suorittaa seuraavalla kahdella tavalla

- Verkkokurssi, jossa oppimistehtäviä
- Verkkotentti

Arviointiasteikko
0-5

Arviointimenetelmät ja -kriteerit

- Verkkokurssi: arviointi arvosanoilla 0-5
- Verkkotentti: arviointi arvosanoilla 0-5

Oppimista tukevat aktiviteetit ja menetelmät

- Verkkokurssi: luentotallenteet, oppimistehtävät
- Verkkotentti

Kohderyhmät
Avoin kaikille (elintarvike- ja ravitsemustieteiden ja muiden koulutusohjelmien opiskelijat sekä avoimia yliopisto-opintoja suorittavat opiskelijat)

Järjestämisajankohta opetusperiodin tarkkuudella
Joka vuosi pidettävät kurssit:

- Verkkokurssi, ajankohdasta sovitaan lukuvuosittain
- Verkkotentti, ajankohdasta sovitaan lukuvuosittain

Suositeltava suoritusajankohta tai -vaihe
Kandiopintojen 1. tai 2. vuosi

Opintokokonaisuus
Kurssi on valinnainen opintokokonaisuudessa HNFB-1000 Ravitsemustieteen perusteet.

Vanhentuminen
Normaali 10 vuoden vanhenemissääntö

Mahdolliset opetuskielet Suomi

Mahdolliset suorituskielet - Suomi, ruotsi

Kirjallisuus ja oppimateriaali

- Ross C et al. Modern Nutrition in Health and Disease. 11th ed. Wolters Kluwer Health. 2012, soveltuvin osin
- Maughan, R. J. Sports nutrition: An IOC Medical Commission Publication. 2nd ed. John Wiley & Sons. 2014, soveltuvin osin
- Liikunta. Käypä hoito -suositus. Suomalaisen Lääkäriseuran Duodecimin ja Käypä hoito -johtoryhmän asettama työryhmä. Helsinki: Suomalainen Lääkäriseura Duodecim, 2016
- Opintojaksolla osoitettu muu materiaali Moodlessa

Opintojakson taso
Alempi korkeakoulututkinto / EQF-taso 6, perusopintoja

HNFB-201 The kaleidoscope of food and human nutrition studies

Kaleidoskooppi ravitsemuksen ja ruokakäyttäytymisen tutkimukseen
Kalejdoskop i forskning av human nutrition och matbeteende

Credits 5 cr

Responsible organisations HNFB

Responsible persons
Mikael Fogelholm, mikael.fogelholm@helsinki.fi
Taru Lindblom, taru.lindblom@helsinki.fi
Riitta Freese, riitta.freese@helsinki.fi

Equivalencies with other studies
–

Prerequisites
No preceding studies are required.

Learning outcomes
After completing the course the student

- has learned key topics, themes and research approaches of the Master's programme
- recognizes and understands different research approaches and study designs used in the study of human nutrition and food-related behaviour
- has acquainted with other students in the programme
- has drawn up a personal study plan and started Master's portfolio work
- is able to apply SPSS platform for statistical analyses

Content
The course is introductory to the Master's programme. Hence, the learning of this course will be deepened and broadened in all other courses of the HNFB programme.

- Introduction to history, present key topics, and study designs in human nutrition and food-related behaviour research
- nutrition and food-related behaviour as a profession
- HNFB studies and professional development (personal study plan and Master´s portfolio)
- Statistical analyses of data (SPSS)

Completion methods
Lectures and seminars 42 h, group work 60 h, individual work 33 h.
Performance: lectures, seminars, group work and seminar presentation, individual work, personal study plan, commencement of master´s portfolio. 80 % participation in lectures/seminars are required

Grading scale pass/fail

Assessment practices and criteria
Will be listed in Moodle

Activities and methods in support of learning
Active participation in contact teaching and group work.

Target groups

The course is compulsory for students in the HNFB Master's programme. The course is not open for students from other Master's programmes.

Teaching period when the course will be offered
Autumn (periods I-II)

Recommended time or stage of studies for completion
1st year

Expiry of studies
The usual 10 year expiry time

Language of instruction English

Language of learning English, suomi, svenska

Literature and learning material
Study material (consisting mainly of published research papers) will be given during the course

Course level
Master's level, (second-cycle degree/EQF level 7), advanced level

HNFB-202 Dietary assessment methods

Ruoankäytön tutkimusmenetelmät, Metoder vid kostundersökning

Credits 5 cr

Responsible organisations HNFB

Responsible persons Noora Kanerva

Equivalencies with other studies
RAV122 course completed as a part of B.Sc. studies can be used for crediting this course.

Prerequisites
Preceding studies are not required, HNFB-121 Kansanravitsemus and HNFB-122 Elintarvikkeet ruokavaliossa are recommended.

Learning outcomes
After completing the course, the student:

- gets an insight on dietary assessment methods: food record, 24 h recall, and a food frequency questionnaire, and their strengths and limitations,
- understands measurement errors related to different dietary assessment methods and can critically evaluate the quality of data collected by different methods,
- describes the concepts of validity and reproducibility and the process of assessing them,
- can apply the knowledge and skills on individual and group level studies.

Content

- Records, recalls and questionnaires in dietary assessment, estimation of portion size
- Food composition databases, nutritional calculation software programs,

- Ethical aspects in human studies,
- Digital applications in dietary assessment
- Measurement errors, under-reporting, validation studies,
- Cultural aspects in dietary assessment,
- Presenting results on food consumption and nutrient intake and interpreting the findings.

Completion methods
Lectures, practical assignments, including tasks performed both individually and in pairs. Attendance on the first lecture and practical assignment is required.
Performance: learning portfolio

Grading scale 0-5

Assessment practices and criteria
Learning portfolio, presentation

Activities and methods in support of learning
The teaching includes interactive contact teaching and group work, independent reading of literature, and discussions based on the literature with students and teachers. Students complete assignments related to different assessment methods. All the assignments are collected into a portfolio. Students keep a log about their learning and performance throughout the course and in the end write a summarizing reflective essay that is included in the portfolio.

Target groups
The course is obligatory for students in the HNFB Master's programme. The course is not open for students from other Master's programmes.

Teaching period when the course will be offered
Autumn periods I-II

Recommended time or stage of studies for completion
1st year

Study module

Expiry of studies
The usual 10 year expiry time

Language of instruction English

Language of learning English, suomi, Svenska

Literature and learning material
- Lovegrove JA, Hodson L, Sharma S, Lanham-New S, Nutrition research methodologies. Wiley Blackwell 2015.
- Willett W. Walter Willett. Nutritional epidemiology. 3rd edition. Oxford University Press, 2012.
- Lecture handouts and scientific papers

Course level
Master's level, (second-cycle degree/EQF level 7), advanced level

HNFB-203 Nutritional status assessment

Ravitsemustilan tutkimusmenetelmät, Metoder för bedömning av näringsstatus

Credits 5 cr

Responsible organisations HNFB

Responsible persons
Riitta Freese, riitta.freese@helsinki.fi
Tiina Jääskeläinen, tiina.j.jaaskelainen@helsinki.fi

Equivalencies with other studies
The course is not compulsory for students who have passed the courses RAV094 Anatomian ja fysiologian harjoitustyöt (Laboratory course in anatomy and physiology) and RAV110 Ravitsemustieteen tutkimusasetelmat (Study designs in nutrition) as part of their BSc degree in Nutrition.

Prerequisites
Recommended prerequisites: HNFB-1000 Ravitsemustieteen perusteet (Basics in nutrition) or equivalent studies, Basics in statistics (ME-004 and ME-005 or equivalent course), HNFB-201 The kaleidoscope of food and human nutrition studies

Learning outcomes
After completing the course, the student will be able to

- explain the key concepts in nutritional status and malnutrition
- apply methods used to evaluate body size and composition as well as energy expenditure and evaluate their reliability
- evaluate the usefulness of biomarkers of nutritional status and intake as well as health in nutrition research
- list physical activity assessment methods that are applicable in nutrition research
- process measurement results and write a report based on them

Content

- Nutritional status and malnutrition at different ages and populations
- Biomarkers related to nutritional status, metabolism and disease states
- Methods for measurement of body size, body composition and growth
- Methods for measurement of energy expenditure and physical activity

Completion methods
Lectures, seminars and article workshops; practicals in laboratory, independent studying. Attendance on 90 % of practicals is required. The course performance consists of study assignments and reports.

Grading scale Grading 0-5

Assessment practices and criteria
The grading criteria will be displayed on Moodle platform

Activities and methods in support of learning
Active participation into contact teaching, workshops and practicals, reports

Target groups
The course is compulsory for students in the HNFB Master's programme Human Nutrition study track. The course is optional for students in the HNFB Master's programme Food-related behaviour study track. Not available for other students.

Teaching period when the course will be offered
Spring term, periods III-IV

Recommended time or stage of studies for completion
HNFB programme 1st year

Expiry of studies
The usual 10 year expiry time

Language of instruction English

Language of learning English, suomi, svenska

Literature and learning material

- Gibson R. Principles of Nutritional assessment. 2nd ed, Oxford University Press, 2005.
- Scientific articles and textbook chapters as informed in the beginning of the course. Mainly electronic materials will be used.

Course level
Master's level, (second-cycle degree/EQF level 7), advanced level

HNFB-204 Evidence on nutrition and health

Ravinto ja terveys - tieteellinen näyttö , Evidens för kost och hälsa

Credits 5 cr

Responsible organisations HNFB

Responsible persons
Riitta Freese, riitta.freese@helsinki.fi

Equivalencies with other studies -

Prerequisites: HNFB-201 The kaleidoscope of food and human nutrition studies and other 1st year HNFB-courses.

Recommended studies:
HNFB-202 Dietary assessment methods, HNFB-203 Nutritional status assessment, HNFB-212 Diet-related molecular mechanisms of chronic diseases and other HNFB-courses from the Human nutrition track will support learning on this course.

Learning outcomes
After completing the course, the student will be able to

combine information cumulated from different studies and evaluate the role of nutrition psychosocial factors in the prevention of non-communicable chronic diseases (NCD) such as obesity, type 2 diabetes, coronary heart disease, cancers, and dementia.
proportion the significance of genes, diet and other lifestyle factors in the development of NCDs
apply a set of criteria for grading evidence on the relationship between a dietary factor and a NCD

Content
The course deepens the student´s knowledge on the links between nutrition and health:

- Scientific evidence, how evidence is evaluated for different purposes
- The roles of diet, other lifestyle factors, psychosocial factors and genes in the prevention of chronic diseases.
- The consept of nutrigenetics.
- Present evidence linking nutrition (nutrients, other substance, foods, diets) with the risk and prevention of non-communicable diseases (NCDs), especially obesity, type 2 diabetes, coronary heart disease, cancers, and dementia.

Completion methods
Contact teaching and seminars, group work, independent studying and essays. Attendance on seminars and 75 % of contact teaching and (or compensatory assignments).

Grading scale Grading 0-5.

Assessment practices and criteria
The grading criteria will be displayed on Moodle platform

Activities and methods in support of learning
Active participation in contact teaching and seminars, group work, essays

Target groups
The course is compulsory for students in the HNFB Master's programme as part of the advanced study module.
The course is available for students from other Master's programmes (including exchange students) with appropriate prior learning.

Teaching period when the course will be offered
Periods I - II

Recommended time or stage of studies for completion 2nd year

Study module
The course is compulsory in the module HNFB-3000 Human Nutrition, Advanced studies
The course is compulsory in the module HNFB-4000 Food-Related Behaviour, Advanced studies

Expiry of studies
The course will expire in 10 years

Language of instruction English

Language of learning English, suomi, svenska

Literature and learning material

Electronic materials will be used. Scientific articles and textbook chapters as informed in the beginning of the course

Course level
Master's level, (second-cycle degree/EQF level 7), advanced level

HNFB-205 Advanced literature examination, Human nutrition

Syventävä kirjallisuuskuulustelu, ihmisen ravitsemuksen opintosuunta
Fördjupande litteraturtentamen, human nutrition

Credits 5 cr

Responsible organisations HNFB

Responsible persons
Mikael Fogelholm, mikael.fogelholm@helsinki.fi Anne-Maria Pajari anne-maria.pajari@helsinki.fi

Prerequisites
HNFB courses of master's level

Learning outcomes
To be able to describe the current status of various aspects in nutrition research and to demonstrate the overall knowledge acquired during the Master's program.

Content
Latest literature on the subject related to study track, assigned by the responsible person.

Completion methods
Examination on scientific literature chosen by the responsible person.

Grading scale
Examination graded 1 to 5

Assessment practices and criteria
Examination (written or oral)

Activities and methods in support of learning

Target groups
Compulsory for all students of Human nutrition study track

Teaching period when the course will be offered
Periods I-IV, by individual agreement with the responsible professor.

Recommended time or stage of studies for completion
2nd year

Study module
The course is compulsory in the module HNFB-3000 Human Nutrition, Advanced studies

Expiry of studies
Normal 10 years expiry time

Language of instruction English

Language of learning English, suomi, svenska

Literature and learning material
Scientific literature chosen (mostly or entirely review papers) by the responsible person. The set of papers will be renewed annually, in order to keep the literature as actual as possible.

Course level
Master's level, (second-cycle degree/EQF level 7), advanced level

HNFB-206 Advanced literature examination, Food-related behaviour

Syventävä kirjallisuuskuulustelu, ruokakäyttäytyminen, Fördjupande litteraturtentamen, matbeteende

Credits 5 cr

Responsible organisations HNFB

Responsible persons
Taru Lindblom, taru.lindblom@helsinki.fi

Equivalencies with other studies
None.

Prerequisites
HNFB courses of EQF-7level

Learning outcomes
After completing the course, the student will be able to describe the current status of research in food related behaviour and to demonstrate the overall knowledge acquired during the Master's programme.

Content
Independently familiarizing oneself to the recent literature on food-related behavior research.

Completion methods
Exam, *Exam on Moodle.*

Grading scale
The course will be evaluated by using the grading 0–5.

Assessment practices and criteria
Evaluation and assessment criteria in course Moodle.

Activities and methods in support of learning
The recent literature on food-related behavior research.

Target groups
Compulsory for HNFB-students in the Food-related behaviour study track. The course is not open for students from other Master's programmes.

Teaching period when the course will be offered
Periods I-IV, by individual agreement with the responsible professor.

Recommended time or stage of studies for completion
2nd year, during or immediately before attending the master's thesis seminar.

Study module
HNFB-4000, Food-related behavior, compulsory advanced studies

Expiry of studies
Valid for 10 years after completion

Language of instruction English

Language of learning
The exam responses can be written in the language of the degree

Literature and learning material
Literature will be given on the course Moodle platform

Course level
Master's level, (second-cycle degree/EQF level 7).

HNFB-207 Master's thesis seminar

Maisterintutkielman seminaari, Magisteravhandlingens seminarium

Credits 5 cr

Responsible organisations HNFB

Responsible persons
Anne-Maria Pajari, anne-maria.pajari@helsinki.fi
Maijaliisa Erkkola, maijaliisa.erkkola@helsinki.fi

Prerequisites:
At least cr in HNFB Master's programme

Recommended studies:
The course is completed in the final year of the programme. In this course, students will apply the theoretical, methodological, and substantial knowledge gained during the HNFB programme in their thesis work.

Learning outcomes
During the seminar, students will

- get insight into the nature of scientific work and be able to build a sound theoretical and methodological framework around their Master's thesis
- learn about formalities and requirements related to a Master's thesis
- receive general guidance and peer support on writing a study plan and a Master's thesis
- get training in oral and written scientific communication
- deepen their knowledge in ethical and methodological aspects of research
- present the major finding(s) in a comprehensible manner for a specific audience, both orally and in writing
- write a comprehensive and consistent Master's thesis.

Content
- requirements for a Master's thesis and its study plan
- ethics of scientific research
- methodological considerations in study designs and exposure assessments citing and managing references
- making compact and informative tables and figures
- preparing scientific oral and poster presentations
- giving constructive feedback and peer support: debates, discussions and critique
- popularising science: writing a press release of a study
- Master's portfolio

Completion methods
Lectures and seminars 42 h (3 h every 2 weeks), individual work 93 h
Performance: lectures, seminars & colloquium, seminar presentations, individual work, learning diary, individual plan for Master's thesis. 80% participation in lectures/seminars is required.

Grading scale
The seminar is graded as passed/failed

Assessment practices and criteria
Seminar

Activities and methods in support of learning
Active participation in the discussions of lectures and seminars

Target groups
The course is obligatory for students in the HNFB Master's programme.
The course is not open for students from other Master's programmes

Teaching period when the course will be offered
Autumn-spring; it is also possible to attend the Master's seminar from spring (periods 3-4) to autumn (periods 1-2-), i.e., during one calendar year.

Recommended time or stage of studies for completion
2nd year, starting either in September of January

Study module
The course is compulsory in the module HNFB-3000 Human Nutrition, Advanced studies
The course is compulsory in the module HNFB-4000 Food-Related Behaviour, Advanced studies

Expiry of studies

Valid for 10 years after completion

Language of instruction English

Language of learning English, suomi, svenska

Literature and learning material
Study material (consisting mainly of published research papers) will be given during the course

Course level
Master's level, (second-cycle degree/EQF level 7), advanced level

HNFB-208 Master's thesis, Human nutrition and food-related behavior

Maisterintutkielma, ihmisen ravitsemus ja ruokakäyttäytyminen, Magisteravhandlingen, human nutrition och matbeteende

Credits 30 cr

Responsible organisations HNFB

Responsible persons
Mikael Fogelholm, mikael.fogelholm@helsinki.fi
Taru Lindblom, taru.lindblom@helsinki.fi

Equivalencies with other studies

Prerequisites:
At least 60 cr in HNFB Master's programme

Recommended studies:
The course is completed in the final year of the programme. In this course the student will apply the theoretical, methodological and substantial knowledge gained during the HNFB programme in their thesis work.

Learning outcomes
After completing the thesis, the student will be able to

- plan and implement a research project in a timeframe
- to define appropriate research questions and base them with a theoretical framework
- to design and carry out data collection under supervision (if applicable)
- to analyse and interpret the research results
- to present the results of the research according to scientific standards
- to receive and use feedback in his/her own research and writing
- to apply ethical principles in science.

Content

- Familiarizing oneself with the scientific literature in the field relevant to their study objective in order to develop the conceptual framework and the empirical setting of the research
- Working on a general study hypothesis (if applicable) and design,
- planning the thesis data collection and analysis,

- presenting and interpreting the results and discussing the contribution of the thesis in relation to the relevant previous research in the field,
- writing the thesis.

The total workload (corresponding 30 cr.) starting from designing the project to its completion is approximately 4.5 months (800 hrs or 20 weeks at 40 hrs/week), but a Master's thesis can also be completed during a longer (e.g. 6—9 months) time-period with a lower weekly working hours. Detailed information about the Master's thesis is provided by the MSc programme.

Completion methods
The Master's thesis is usually based on an empirical research project and critical contemplation of the results in the light of scientific literature on the topic. Very often the student collects all their data, or at least participates in data collection. Sometimes the student receives data already collected (typical in epidemiological studies), but then the data analysis part is large and often demanding.
Master's thesis most often includes the following parts:

- Introduction and review of literature
- Presentation of methods used
- Results and discussion (interpreting and discussing the results in the light of existing literature)

Grading scale
The written Master's thesis is evaluated using the grading 0—5, in which 0 is failed and 5 is excellent.

Assessment practices and criteria
The written Master's thesis

Activities and methods in support of learning
Each MSc thesis must have at least one supervisor
The student should attend the HNFB Master's thesis seminar HNFB-207 simultaneously.

Target groups
The course is obligatory for students in the HNFB Master's programme. The course is not open for students from other Master's programmes

Teaching period when the course will be offered
Autumn-spring

Recommended time or stage of studies for completion
2nd year

Study module
The course is compulsory in the module HNFB-3000 Human Nutrition, Advanced studies (for students in HN study track) and in the module HNFB-4000 Food-Related Behaviour, Advanced studies (for students in FB study track)

Expiry of studies The usual 10 year expiry time

Language of instruction English

Language of learning English, suomi, svenska

Literature and learning material

Mainly international, scientific papers depending on the topic of the Master's thesis.

Course level Master's level, (second-cycle degree/EQF level 7), advanced level

HNFB-211 Advanced nutritional physiology

Syventävä ravitsemusfysiologia, Avancerad näringsfysiologi

Credits 5 cr

Responsible organisations HNFB

Responsible persons
Riitta Freese, riitta.freese@helsinki.fi

Equivalencies with other studies
HNFB-113 Advanced Nutritional Physiology

Prerequisites
Recommended prerequisities: Human anatomy and physiology (HNFB-111 Ihmisen anatomia ja fysiologia or similar studies), Basics in nutritional physiology (HNFB-112 Ravitsemusfysiologia or similar studies), Metabolism (MOLE-203 Metabolia or similar studies)

Learning outcomes
After completing the course, the student is able to

- integrate molecular and physiological knowledge in understanding the uptake, metabolism and functions of nutrients in the body
- distinguish different aspects of the regulation in nutritional physiology
- reflect their learning process

Content
The course focuses on the physiological regulation of food intake, digestion and absorption of macro- and micronutrients as well as their transport, metabolism, and storage and functions at the molecular and physiological level. In addition, short and long-term mechanisms involved in metabolic regulation will be covered.

Completion methods
Independent reading, participation in contact teaching, possible learning assignments, learning diaries or examination

Grading scale Grading 0-5

Assessment practices and criteria
Active attendance at contact teaching and learning diary or examination.
The grading criteria will be displayed on Moodle platform.

Activities and methods in support of learning
Reading, interaction in contact teaching (including group dicussions)

Target groups

The course is compulsory for students taking the module HNFB-2100 Nutritional Physiology and Molecular Nutrition in the HNFB Master's programme. The course is available for all HNFB students. The course is available for students from other Master's programmes (including exchange students) with appropriate prior learning.

Teaching period when the course will be offered
I and II period

Recommended time or stage of studies for completion
1st year in Master´s studies

Study module
The course is compulsory in the module HNFB-2100 Nutritional Physiology and Molecular Nutrition

Expiry of studies
Valid for 10 years after completion

Language of instruction English

Language of learning English, suomi, svenska

Literature and learning material

- Stipanuk MH, Caudil M. Biochemical, Physiological, and Molecular Aspects of Human Nutrition, 4th ed. Elsevier 2019.
- Frayn KN, Evans R. Metabolic regulation, a human perspective. 4th. ed. Wiley-Blackwell, Oxford 2019.
- Other material will be listed in Moodle.

Course level Master's level, (second-cycle degree/EQF level 7), advanced level

HNFB-212 Diet-related molecular mechanisms of chronic diseases

Ravinnon vaikutusmekanismit kroonisten sairauksien synnyssä, Molekylära mekanismer mellan diet och kroniska sjukdomar

Credits 5 cr

Responsible organisations HNFB

Responsible persons
Tiina Jääskeläinen, tiina.j.jaaskelainen@helsinki.fi

Prerequisites
HNFB-111 Anatomian ja fysiologian perusteet or equivalent.

Learning outcomes
After completing the course, the student will understand the molecular and physiological mechanisms leading to the development of chronic, non-communicable diseases in humans, such as obesity, diabetes, coronary heart disease, and cancers, and be able to explain the systemic and molecular mechanisms by which diets, nutrients and phytochemicals affect the development of chronic diseases.

Content

- role of immune system and gut microbiota in the development of chronic diseases
- mechanisms of cancer
- metabolic disorders related to excess energy intake and obesity
- role of stress and sleep in the development of metabolic disorders
- type 2 diabetes
- disorders of lipid metabolism and mechanisms of coronary heart disease
- bone health
- role of diet and diet-derived compounds in the aforementioned disorders

Completion methods
Lectures and seminars with reading materials beforehand (Minimum attendance of 80% required).
Performance: lectures, group work, written assignments

Grading scale Scale 0-5

Assessment practices and criteria
Written assignments and active participation in classroom.

Activities and methods in support of learning
Active participation in discussions in classroom.

Target groups
The course is compulsory for students taking HNFB-2100 Nutritional Physiology and Molecular Nutrition in the HNFB Master's programme. The course is available for students from other Master's programmes (including exchange students) with appropriate prior learning by agreement.

Teaching period when the course will be offered
III and IV period

Recommended time or stage of studies for completion
1st year of master's studies

Study module
The course is compulsory in the module HNFB-2100 Nutritional Physiology and Molecular Nutrition

Expiry of studies
Valid for 10 years after completion

Language of instruction English

Language of learning English, suomi, svenska

Literature and learning material
Study material (consisting mainly of published research papers) will be given during the course.

Course level
Master's level, (second-cycle degree/EQF level 7), Advanced level
Also suitable suitable on Doctoral level (third-cycle (doctoral) degree/EQF level 8)

HNFB-213 Experimental Nutrition Research

Kokeellinen ravitsemustutkimus, Experimentell nutritionsforskning

Credits 5 cr
Responsible organisations HNFB

Responsible persons
Tiina Jääskeläinen, tiina.j.jaaskelainen@helsinki.fi

Prerequisites
HNFB-211 Advanced Nutritional Physiology, HNFB-212 Diet-related molecular mechanisms of chronic diseases

Learning outcomes
After completing the course, the student will have understanding of the research ethics, methods and experimental designs (human interventions, animal experiments, cell culture studies) used to study the effects of nutrition on physiological and molecular pathways in health and disease.

Content
- designs of clinical nutrition interventions and how to choose the right setting and methods for different types of research questions
- fundamentals of carrying out nutrition research using animal models and cell cultures
- ethics related to experimental nutrition research (clinical trials and animal models)

Completion methods
Lectures and seminars, group work in classroom and lab. Attendance compulsory.

Grading scale Scale 0-5

Assessment practices and criteria
Research plan, mini intervention, reports, activity in classroom and lab.

Activities and methods in support of learning
Students act as peer reviewers for each other's work.

Target groups
The course is compulsory for students taking HNFB-2100 Nutritional Physiology and Molecular Nutrition in the HNFB Master's programme. The course is available for students from other Master's programmes by agreement.

Teaching period when the course will be offered
Periods I-II

Recommended time or stage of studies for completion
2nd year

Study module
The course is compulsory in the module HNFB-2100 Nutritional Physiology and Molecular Nutrition

Expiry of studies (New)

Valid for 10 years after completion

Language of instruction English

Language of learning English, suomi, svenska

Literature and learning material

- Lovegrove, Julie A et al. Nutrition Research Methodologies, Wiley 2015
- Other study material consists of scientific articles which are listed in Moodle.

Course level Master's level, (second-cycle degree/EQF level 7), Advanced level

HNFB-223 Nutritional epidemiology

Ravitsemusepidemiologia, Nutritionsepidemiologi

Credits 5 cr

Responsible organisations HNFB

Responsible persons
Noora Kanerva noora.kanerva@helsinki.fi

Equivalencies with other studies

Prerequisites

Recommended studies:
HNFB-121 Kansanravitsemus (Public Health Nutrition)
HNFB-202 Dietary assessment methods

Learning outcomes
After completing the course, the student:

- masters the epidemiological study designs in nutrition,
- is able to evaluate, summarize, interpret and discuss nutritional epidemiological research findings whilst considering strengths and weaknesses as well as prior evidence,
- has a strong insight on dietary exposures and their variation, methodological considerations in epidemiological study designs, and measurement errors.
- is able to conduct and interpret statistical analyses on a given exposure-outcome association in an existing dietary dataset.

Content

- methodological considerations in study designs in nutritional epidemiology,
- a single dietary factor and whole diet approaches in epidemiological analysis,
- life-span developmental approach,
- linking exposures and outcomes: association and causation, role of chance, errors, bias, and confounding.
- Interpretation of nutritional epidemiological findings,
- adjustment for total energy, selection of confounders
- continuous versus categorical analyses,
- correlations, linear and logistic regressions, factor analyses, analysis of variance,

Completion methods
Lectures, paper critique workshops (flipped classroom), mentor-guided group work, and computer tutorial including individually performed assignments (possibility to work on student's own data). Minimum attendance of 50% required.

Grading scale Scale 0-5

Assessment practices and criteria
An oral exam, work report on building a statistical model, and research plan (all graded 0-5)

Activities and methods in support of learning
The course will consist of lectures, debates and discussions with experts, paper critique workshops, and computer tutorials. The practical sessions and computer tutorials will ensure that the student will be equipped to apply the knowledge and skills taught in the course in practice. Active participation is required.

Target groups
Elective as a part of the HNFB-2200 Kansanravitsemus (Public Health Nutrition) core module

Teaching period when the course will be offered
Spring III-IV

Recommended time or stage of studies for completion
1st year

Study module
The course is compulsory in the module HNFB-2200 Public Health Nutrition

Expiry of studies
The usual 10 year expiry time

Language of instruction English

Language of learning English, suomi, svenska

Literature and learning material
- Willett W: Nutritional epidemiology
- Hulley ym. Designing clinical research: an epidemiological approach.
- Webb P, Bain C. Essential epidemiology, an introduction for students and health professionals.

Course level
Master's level, (second-cycle degree/EQF level 7), advanced level

HNFB-221 Nutrition and society

Ravitsemus ja yhteiskunta, Nutrition och samhället

Credits 5 cr

Responsible organisations HNFB

Responsible persons
Mikael Fogelholm, mikael.fogelholm@helsinki.fi

Prerequisites: Preceding studies are not required.

Recommended studies:
Courses related to human behaviour and change in behaviour (psychology, social psychology, etc.)
Courses related to food systems, global issues and sustainable development

Learning outcomes
The student will learn:

- an insight on how population-based health promotion campaigns and programs are planned and evaluated according to the socio-ecological model of health promotion
- to understand what health promotion is from a broad perspective
- to understand the societal tensions and requirements on food choice to understand the global challenges of non-communicable diseases
- to apply the knowledge in making a descriptive plan for or analyzing a health-promotion program /project

Content

- Defining health promotion
- Ethics of health promotion
- Health promotion from an international perspective
- The socio-ecological model of health promotion
- Health promotion as a process
- Evaluation of health promotion programs
- Actors in health promotion: the role of governmental policy and NGO's

Completion methods
Lectures 22 h, group work 10 h, independent studies 103 h, final examination. Not obligatory to be present at lectures.
Performance: group work, written examination

Grading scale Scale 0-5

Assessment practices and criteria
Final examination

Activities and methods in support of learning
Active participation in the lectures and related discussions, group work.

Target groups
Elective as a part of HNFB-2200 Public Health Nutrition core module
The course is open to all HNFB students and can be used by students from other Master's programs

Teaching period when the course will be offered
Periods I-II

Recommended time or stage of studies for completion
1st year

Study module
The course is elective in the module HNFB-2200 Public Health Nutrition

Expiry of studies
Valid for 10 years after completion

Language of instruction English

Language of learning English, suomi, svenska

Literature and learning material
Study material (scientific articles, program papers) will be given during the course.

Course level Master's level, (second-cycle degree/EQF level 7), advanced level

HNFB-225 Nutrition and Food Services

Ravitsemus ja ruokapalvelut, Näring och matserving

Credits 5 cr

Responsible organisations HNFB

Responsible persons
Liisa Korkalo, liisa.korkalo@helsinki.fi

Prerequisites
-
Learning outcomes
After the course, the student will

- understand the role of food services in public health nutrition and in health promotion
- can design sustainability and health interventions within the food service sector
- can apply nutritional recommendations in food services
- understand the role of nutritional expertise in food services

Content

- Food services for different age groups and in different contexts
- Initiatives and interventions to support healthy eating in food services
- Initiatives and interventions to improve sustainability in food services
- Applying nutritional recommendations in food services
- Menu planning for special diets

Completion methods
Lectures, assignments, site visits.

Grading scale Pass/fail

Assessment practices and criteria
Details can be found on the Moodle learning platform.

Activities and methods in support of learning
Active participation throughout the course.

Target groups
Elective as a part of the module HNFB-2200 Public Health Nutrition.
The course can be used by students from other Master's programs.

Teaching period when the course will be offered
Autumn, period II. The course is arranged every other year.

Recommended time or stage of studies for completion
1st year or 2nd year

Study module
The course is elective in the module HNFB-2200 Public Health Nutrition.

Expiry of studies
Valid for 10 years after completion

Language of instruction English

Language of learning English, suomi, svenska

Literature and learning material
Study material will be provided during the course.

Course level Master's level, (second-cycle degree/EQF level 7), advanced level

HNFB-226 Food systems and nutrition in low- and middle-income countries

Ruokajärjestelmät ja ravitsemus alhaisen tulotason ja keskitulotason maissa,
Matsystem och nutrition i låg- och medelinkomstländer

Credits 5 cr

Responsible organisations HNFB Master´s programme

Responsible persons
Mikael Fogelholm, mikael.fogelholm@helsinki.fi

Equivalencies with other studies
HNFB-141 Nutritional problems in low-income countries, 5 cr
FHDP-148 Food and Nutrition Security: a global perspective, 3 cr

Prerequisites:
Preceding studies are not required.

Recommended preceding studies:
Previous studies in the fields of Human Nutrition and/or Food Sciences will enhance learning on the course.
For example:
HNFB-221 Nutrition and society
HNFB-202 Dietary assessment methods

Learning outcomes
After completing the course, the student will be able to

- differentiate the main characteristics and determinants of food security and nutrition status in low- and middle-income countries (LMICs)
- describe the most important methods to monitor food security, safety and nutrition in LMIC's
- analyze existing data on the food security and nutritional situation in a LMIC
- prioritize policies related to food systems and nutrition to improve the situation in the country
- describe typical food systems in LMICs and the challenges they pose for food and nutrition security and food safety.

Content

- food and nutrition security and food safety in low- and middle-income countries (LMICs)
- food systems, innovation and development of nutrition-sensitive value chains in LMICs
- different forms of malnutrition and its consequences
- undernutrition, including micronutrient deficiencies
- obesity & overweight
- maternal & child malnutrition
- double burden of malnutrition
- food habits and culture, nutrition transition
- methodology/monitoring of food and nutrition security, dietary intake and diversity, and nutritional status
- nutrition specific and nutrition sensitive programs to fight malnutrition
- organizations, global nutrition politics

Completion methods
Lectures 42 h, group work 30 h (problem-based learning case), independent study 53 h (scientific articles, reports, chapters of book).
Performance: group work, learning diary

Grading scale
Scale 0-5, consisting of 50% from the group work and 50% from the learning diary.

Assessment practices and criteria
Group work tasks measures students' ability to apply the knowledge they have gained during the course in practice. It assess students' ability to analyse, discuss, food and nutrition security and prioritize policies in different food systems in LMICs.
As the course materials consist of individual scientific articles and reports, learning diary assesses how students succeeded to summarize and digest the information and gradually build their knowledge to reach the learning aims of the course.

Activities and methods in support of learning
Active participation in the lectures and related discussions, problem-based group work, mentoring of group work, course literature / preliminary reading and online materials for the lectures.

Target groups
The students of the HNFB and FOOD Master´s programmes.
The course is open to students of other Master's programmes and to exchange students. The course can also be a part of continuous learning course selection.

Teaching period when the course will be offered

Spring (periods III and IV)

Recommended time or stage of studies for completion
1st year in Master´s studies.

Study module
The course is optional in the module HNFB-2200 Public Health Nutrition
Can be an elective for food science students

Expiry of studies
Valid for 10 years after completion

Language of instruction English

Language of learning English, suomi, svenska

Literature and learning material
Study material (e.g., scientific articles, reports, white papers, program papers, expert podcasts and videos, online databases) will assigned to the course in Moodle.

Course level Master's level, (second-cycle degree/EQF level 7), advanced level

HNFB-231 Theoretical and empirical perspectives to food-related behaviour

Teoreettisia ja empiirisiä näkökulmia ruokakäyttäytymiseen, Teoretiska och empiriska perspektiver till matbeteende

Credits 5 cr

Responsible organisations HNFB

Responsible persons
Taru Lindblom, taru.lindblom@helsinki.fi

Equivalencies with other studies
None. Please note that this course in not a research method course.

Prerequisites
Preceding studies are not required.

Learning outcomes
After completing the course, the student…

- Understands various sociological and social psychological approaches that can be used in studying food and eating.
- Is able to analyse differences (e.g. in terms of research questions that can be addressed) between these various theoretical and empirical approaches as well as their potential practical applications.
- Is able to apply these different approaches in the study of food-related behaviour, e.g. in their own master thesis.

Content

The course familiarises the student with various social scientific, particularly social psychological and sociological approaches to studying food and eating. The course focuses on how eating behaviours and food choices are shaped by emotions, self-regulation, habits, social norms, self-presentation and identity construction, how they are part of social practices, and how they are associated with social structures and cultural variations. During the course research settings using qualitative and quantitative methods as well as various approaches are scrutinized.

Completion methods

- Participation in teaching
- Written assignment
- Small group work and presentation
- Independent study

Course structure: Lectures and seminars 21 h, group work 50 h, independent studies 64 h

Lecture course and seminar:
Active participation in lectures and seminars (85% attendance required; compensatory assignments for those lectures/seminars that the student does not attend), group work (written assignment and seminar presentation based on the selected literature), independent writing work.

Grading scale
The course will be evaluated by using the grading 0–5. Details can be found on the Moodle learning platform.

Assessment practices and criteria
Evaluation and assessment criteria in course Moodle.

Activities and methods in support of learning
Activities supportive of learning include interactive contact teaching, independent reading of the literature and searching for the literature, group work (written assignment and seminar presentation based on the selected literature), discussions based on the literature with students and teachers, and a learning diary written independently

Target groups
Obligatory to Food-related Behavior study track students as a part of the Food-related Behavior in a HNFB-2300 Food-related behavior in a changing society core module. Open to students from Human Nutrition study track as well as students in the Home Economics study track in the Master's Programme in Education. If there is room, students from other applicable programmes and exchange students can also participate.

Teaching period when the course will be offered
2nd period

Recommended time or stage of studies for completion
1st year of HNFB programme studies

Study module
Obligatory as a part of the Food-related Behaviour in a HNFB-2300 Food-related behavior in a changing society core module.

Expiry of studies

Valid for 10 years after completion

Language of instruction English

Language of learning The individual assignment can be written in the language of the degree.

Literature and learning material
Literature and learning material will be given during the course on the course Moodle platform

Course level Master's level, (second-cycle degree/EQF level 7).
Also suitable on Doctoral level (third-cycle (doctoral) degree/EQF level 8).

HNFB-240 Development of scientific expertise

Tieteellisen asiantuntemuksen vahvistaminen, Utveckling av vetenskaplig expertis

Credits 5cr

Responsible organisations HNFB

Responsible persons
The responsible professor of one´s study track
Human nutrition: Mikael Fogelholm, mikael.fogelholm@helsinki.fi
Food-related behaviour: Taru Lindblom, taru.lindblom@helsinki.fi

Prerequisites
One year HNFB studies

Learning outcomes
After completing the assignment the student has

- independently developed a study question and authored a literature review or essay on the topic chosen by the student (and agreed by the examiner/teacher)
- formulated relevant arguments and/or evaluated present evidence based on scientific literature
- gained in-depth knowledge on topic.

Content

- Invention of study question and narrowing down the topic of the text,
- literature search, reading and drafting,
- writing of a literature review or essay.

Completion methods
This is an independent scientific writing task. The student suggests relevant topic and schedule to the responsible professor. After agreement, the student writes a literature review or essay on the topic and returns the text in the settled schedule in Moodle.

Grading scale Scale 0-5

Assessment practices and criteria
A literature review or essay. Evaluation 0–5 according to criteria listed in Moodle.

Activities and methods in support of learning
More detailed instructions can be found in the Moodle page of the course.

Target groups
The course is available only for students in the HNFB Master's programme

Teaching period when the course will be offered
Anytime, by agreement. The student planning to take the course should contact the responsible teacher during a teaching period.

Recommended time or stage of studies for completion
Preferably first summer or second study year

Study module
The course may be included as an elective advanced level course in the HNFB-3000 Human Nutrition, Advanced Studies or HNFB-4000 Food-Related Behaviour, Advanced Studies.

Expiry of studies
Valid for 10 years after completion

Language of instruction English

Language of learning English, suomi, svenska

Literature and learning material
Scholarly literature relevant to the topic.

Course level Master's level, (second-cycle degree/EQF level 7), advanced level

HNFB-241 Optional advanced literature examination in Nutritional Physiology

Valinnainen kirjallisuuskuulustelu, ravitsemusfysiologia, Fakultativ litteratur examination i näringsfysiologi

Credits 5cr

Responsible organisations HNFB

Responsible persons
Anne-Maria Pajari, anne-maria.pajari@helsinki.fi

Prerequisites
HNFB-211 Advanced Nutritional Physiology

Learning outcomes
To deepen the knowledge and understanding of a chosen, advanced topic on the field of nutritional physiology and molecular nutrition

Content
The content is chosen based on the interest of the student and accepted by the teacher. The literature may consist of advanced level textbooks and/or scientific articles.

Suggested fields:

- vitamins and minerals
- metabolism
- nutrigenomics and epigenomics
- gut metabolism, microbiota and immunology

Completion methods
Independent reading and a written and/or oral examination.

Grading scale Scale 0-5

Assessment practices and criteria
Examination. The student will get a short oral feedback.

Activities and methods in support of learning

Target groups
The course is optional for students in the HNFB Master's programme. The course is elective in the module HNFB-2100 Nutritional physiology and molecular nutrition. Not available for other students.

Teaching period when the course will be offered
Anytime, by agreement. The student planning to take the exam should contact the responsible teacher during a teaching period.

Recommended time or stage of studies for completion
Preferably first summer or second study year

Expiry of studies
Valid for 10 years after completion

Language of instruction English

Language of learning English, suomi, svenska

Literature and learning material
By agreement

Course level Master's level, (second-cycle degree/EQF level 7), advanced level

HNFB-242 Optional advanced literature examination in Public Health Nutrition

Valinnainen kirjallisuuskuulustelu, Kansanravitsemus, Fakultativ litteratur examination i Folkhälsonäring

Credits 5cr

Responsible organisations HNFB

Responsible persons
Mikael Fogelholm, mikael.fogelholm@helsinki.fi
Maijaliisa Erkkola, maijaliisa.erkkola@helsinki.fi

Prerequisites
HNFB courses of EQF-7 level

Learning outcomes
To broaden knowledge and understanding of a chosen, advanced topic related to public health nutrition.

Content
Literature from a chosen, advanced textbook or a collection of scientific papers, mainly reviews. The topic can be chosen by the student, but it must be accepted by the teacher(s).

Completion methods
Written and/or oral examination on scientific literature chosen together by the student and responsible teachers.

Grading scale Scale 0-5

Assessment practices and criteria
Examination (written or oral) or as a scientific presentation, including questions and answers. To be agreed by the students and teacher(s).

Target groups
Can be chosen from different options

Teaching period when the course will be offered
Anytime, by agreement. The student planning to take the course should contact the responsible teacher during a teaching period.

Recommended time or stage of studies for completion
2nd year

Expiry of studies
Valid for 10 years after completion

Language of instruction English

Language of learning
Both literature and examination may be in Finnish, Swedish or English (note! literature and examination do not need to be in the same language)

Literature and learning material
Literature from a chosen, advanced textbook or a collection of scientific papers, mainly reviews

Course level Master's level, (second-cycle degree/EQF level 7), advanced level

HNFB-251 Traineeship

Harjoittelu, Praktik

Credits 5cr

Responsible organisations HNFB

Responsible persons
Liisa Korkalo, liisa.korkalo@helsinki.fi

Learning outcomes
After engaging in Traineeship, the student

- has gained an understanding about the qualification requirements of the profession
- Has applied theoretical knowledge and skills in practice
- Has recognized their own strengths and areas in need of development
- Has gained an understanding about the operations of the employer organization
- Has established networks with experts in their field

Completion methods
The student must agree with the teacher that their planned traineeship is suitable for the course. Minimum of 2 months (can be done in 4 week periods). A minimum duration of a university subsided traineeship is two months.
Performance: a written report and a reflection seminar after traineeship (usually organized twice a year)

Grading scale Pass/fail

Activities and methods in support of learning
Student: good advance preparation, making full use of the employment period and a thorough reflection and reporting afterwards

Target groups
Elective as a part of the HNFB studies (working life skills)

Teaching period when the course will be offered
By agreement.

Recommended time or stage of studies for completion
HNFB programme, 2nd year (recommendation, summer between 1st and 2nd study year)

Expiry of studies
Valid for 10 years after completion

Language of instruction English

Language of learning English, suomi, svenska

Course level Master's level, (second-cycle degree/EQF level 7), advanced level

HNFB-252 Research Group Internship

Tutkimusharjoittelu Forskningspraktik

Credits 1−5cr

Responsible organisations HNFB

Responsible persons
Anne-Maria Pajari, anne-maria.pajari@helsinki.fi

Prerequisites
HNFB-202 Dietary assessment methods or HNFB-203 Nutritional status assessment or other relevant studies depending on the internship's discipline.

Learning outcomes
During an internship in any of the HNFB-related research groups, the student

- learns how research is done in practice and how it fits to the discipline's international research community
- deepens skills and knowledge on methods how to carry out research practices teamwork, enhances critical thinking, and boosts self-confidence explores her/his future role as a scientist

Content

- Taking actively part in a research group's scientific project and carrying out a set of analyses related to the project
- Writing a report reflecting the work performed in a research group

Completion methods
The student is expected to work full-time during the internship. The length and the contents of the internship will be agreed prior starting the work and determines the credits received. Performance: a written report.

Grading scale Pass/fail

Assessment practices and criteria
A written report

Activities and methods in support of learning
The student will have a named supervisor in the research group where the internship is carried out.

Target groups
Elective as a part of the HNFB studies (working life skills)

Teaching period when the course will be offered
By agreement

Recommended time or stage of studies for completion
HNFB programme, 1st or 2nd year

Expiry of studies
Valid for 10 years after completion

Language of instruction English

Language of learning English, suomi, svenska

Course level Master's level, (second-cycle degree/EQF level 7), advanced level

HNFB-253 Service-Learning

Palveluoppiminen, Service lärning

Credits 1−5 cr

Responsible organisations HNFB

Responsible persons
Maijaliisa Erkkola, maijaliisa.erkkola@helsinki.fi

Recommended studies:
HNFB-121 Kansanravitsemus (Public Health Nutrition)
HNFB-221 Nutrition and Society
HNFB-222 Health promotion project work
SOSM-SP305 Behaviour change and intervention planning

Learning outcomes
After engaging in Service-Learning, the student:

- learns about the context in which service is provided,
- applies academic knowledge and skills to the complexity of a real-world situation, investigates her future role as a professional,
- Improves critical thinking, teamwork, effective communication skills and self-confidence, strengthens her role as a responsible member of the society.

The overall purpose of service learning is to instill in students a sense of civic engagement and responsibility and work towards positive social change within society.

Content

- Preparation work; mapping needs together with a civil society actor
- Service work (field work)
- Project evaluation
- Writing a report reflecting the experience and learning

Completion methods
Reflection and experiential learning strategies underpin the learning process and the service is link to the academic discipline.
Performance: a written report

Grading scale Scale 0-5

Assessment practices and criteria
A written report

Activities and methods in support of learning
Service-learning is a form of experiential and reflective learning that focuses on issues in a real-world context. Reflection is a main component lending to students professional and personal development. The community partner is a valued partner with equal say with ample room for knowledge exchange.

Target groups
Elective as a part of the HNFB studies (working life skills)

Teaching period when the course will be offered
By agreement.

Recommended time or stage of studies for completion
HNFB program, any time

Expiry of studies
Valid for 10 years after completion

Language of instruction English

Language of learning English, suomi, svenska

Course level Master's level, (second-cycle degree/EQF level 7), advanced level

HNFB-254 Other discipline related activities

Muu tieteenalaan liittyvä toiminta, Övriga aktiviteter relaterade till disciplinen

Credits 1−5 cr

Responsible organisations HNFB

Responsible persons
Riitta Freese, riitta.freese@helsinki.fi

Learning outcomes
After completing the course the student has

- developed professional skills or project competence in a project related to the discipline,
- acquired teaching experience as a peer teacher,
- deepened her/his knowledge on a particular subject in the discipline or
- gained perspective on scientific research as a study participant.

Content
The content of the course depends on the task and may include, for example, working in an organizing committee, peer teaching or writing an article. The student can also get credits as a research person. A written report is part of the study attainment.

Completion methods
Credits can be obtained, for example, from participation in the organization of an event or acting as a study participant. Credits can be obtained also from peer teaching. In some cases, the task may also be a written assignment.
Completion requires a written report. The number of credits, the timetable and the content of the report are agreed upon with the investigating researcher or the responsible teacher.

Grading scale Pass/fail

Assessment practices and criteria
A written report.

Activities and methods in support of learning

The activities depend on the task. A report, which should include reflection on the assignment and learning during the course, is an essential part of the course.

Target groups
Elective as a part of the HNFB studies (working life skills)

Teaching period when the course will be offered
By agreement.

Recommended time or stage of studies for completion
By agreement.

Expiry of studies
Valid for 10 years after completion

Language of instruction English or Finnish

Language of learning English, suomi, svenska

Course level Master's level, (second-cycle degree/EQF level 7), advanced level

HNFB-260 Changing theme course in Human Nutrition and Food-Related Behaviour

Vaihtuvasisältöinen ihmisen ravitsemukseen ja ruokakäyttäytymiseen liittyvä kurssi
Varierande kurs om human nutrition och matbeteende

Credits 1 - 5 cr

Responsible organisations HNFB

Responsible persons
Riitta Freese, riitta.freese@helsinki.fi

Content
Variable course, for example courses provided by visiting lecturers.

Completion methods
Contact teaching, on-line teaching

Grading scale Pass/fail

Assessment practices and criteria
Will be informed separately

Activities and methods in support of learning
Will be informed separately

Target groups
HNFB Master´s students, possibly open to other students.

Teaching period when the course will be offered
The course is not provided every year

Recommended time or stage of studies for completion
Year 1 or 2

Expiry of studies
Valid for 10 years after completion

Language of instruction English or Finnish

Language of learning English, suomi, svenska

Literature and learning material
Literature provided by the teachers.

Course level Master's level, (second-cycle degree/EQF level 7), advanced level