



Programme-specific Section of the Curriculum for the MSc Programme in Human Nutrition at the Faculty of Science, University of Copenhagen 2023 (rev. 2024)

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1 Title, affiliation and language

A shared section that applies to all BSc, part-time MSc and MSc Programmes at the Faculty of Science is linked to this programme-specific curriculum.

1.1 Title

The MSc Programme in Human Nutrition leads to a Master of Science (MSc) in Human Nutrition with the Danish title: *Cand.scient. (candidatus/candidata scientiarum) i human ernæring*.

1.2 Affiliation

The programme is affiliated with the Study Board of Food, Human Nutrition and Sports, and the students can both elect, and be elected, to this study board.

1.3 Corps of external examiners

The following corps of external examiners is used for the central parts of the MSc Programme:

- Corps of External Examiners for Food Science (*levnedsmiddelvidenskab*).

1.4 Language

The language of this MSc Programme is English.

2 Academic profile

2.1 Purpose

The main purpose of the MSc in Human Nutrition programme is to educate academics who have a thorough understanding of human nutrition science and the importance of nutrition in health and disease.

2.2 General programme profile

The Human Nutrition programme gives the student comprehensive knowledge, skills and competences in: nutrition physiology and metabolism, nutritional requirements through different stages of life, and nutrition (and also physical activity) in the prevention and treatment of non-communicable diseases. Students will also acquire skills and competences in research methods related to human studies, including nutritional assessment techniques, study design, nutrition epidemiology concepts, and evaluation of scientific literature on nutrition and health.

The study programme will cover elective courses around clinical nutrition, sustainable diets and food systems, challenges in national and international public health nutrition-related issues, gut microbiome, metabolomics and bioactive food components. The programme involves lectures and exercises, group work, case studies and final work on an MSc thesis project. A graduate from the MSc programme in Human Nutrition will become an expert on, nutrition and health and relevant research methods in this field and can contribute to handling both local and global nutrition-related health challenges.

Human Nutrition is the key subject area of the programme.

2.3 General structure of the programme

The MSc Programme is set at 120 ECTS.

There are no defined specialisations in this programme.

2.4 Career opportunities

Graduates in human nutrition have a solid foundation for careers in both the public and private sectors. They are attractive candidates for positions in the food and pharmaceutical industries, hospitals, food and health authorities, governmental agencies and municipalities. Graduates are qualified for positions as e.g. project managers, trial managers, medical writers, researchers or

consultants in national and international organisations. Graduates are also qualified for teaching positions in tertiary educational institutions, for example at university colleges, and for clinical dietician team-leaders in hospitals provided they select courses for such competence profile. The MSc programme also prepares students for continuing to PhD studies, should they choose to pursue an academic career.

3 Description of competence profiles

Students following the MSc Programme acquire the knowledge, skills and competences listed below. Students will also acquire other qualifications through elective subject elements and other study activities.

3.1 Competence profile

Graduates holding an MSc in Human Nutrition have acquired the following:

Knowledge about:

- Digestion, absorption, metabolism, regulation and function of nutrients in normal states and selected disease-related physiological conditions.
- Dietary assessment tools and laboratory methods used in human nutrition.
- Nutritional requirements and dietary reference values, and dietary guidelines for all population groups including vulnerable groups such as children, pregnant women and older adults.
- Management of the most common lifestyle-related non-communicable diseases and malnutrition by means of diet therapy and physical activity.
- Study design and research methods used in human nutrition, including their advantages and limitations.
- Concepts of nutritional epidemiology, including bias and confounding
- Statistical methods routinely used in nutritional research to evaluate treatment differences and associations while avoiding bias.

Skills in/to:

- Collect and evaluate dietary and other relevant data using state-of-the-art, incl. digital methodologies.
- Evaluate key methodologies used in the field of human nutrition with regard to validity, reliability, and applicability.
- Apply standard epidemiological and statistical methodology in a nutrition context.
- Communicate specialist knowledge on nutrition and how it affects the entire life cycle of growth, health, and well-being.
- Evaluate and be critical of the scientific literature within the field of human nutrition.
- Summarise theories, methodologies and recent research findings in human nutrition.

Competences in/to:

- Adapt theories and methodologies from nutritional science in practice to promote and support a healthy living.
- Initiate, design, plan, and carry out human studies and projects.
- Monitor, interpret and advise on nutrition- and diet-related challenges and concerns of individuals and society.
- Teach topics relevant to human nutrition.
- Assess and organise own future learning processes in the field of human nutrition, to accommodate new trends, such as plant-based diets and sustainability.

4 Admission requirements

4.1 Bachelor's degrees that automatically fulfil the academic requirements

Applicants with one of the following Bachelor's degrees automatically fulfil the academic requirements for admission to the MSc Programme in Human Nutrition:

- Food Science (*fødevarer og ernæring*) with the Food, Health and Nutrition subject-specific package from University of Copenhagen

4.2 Other Bachelor's degrees

Applicants with a Bachelor's degree, Professional Bachelor's degree or equivalent from Danish or international universities other than those listed in 4.1 are qualified for admission to the MSc Programme in Human Nutrition if the programme includes the following:

Minimum 120 ECTS within the field of natural science including minimum:

- 7.5 ECTS in biochemistry (incl. laboratory work) equivalent in content to the biochemistry course LKEB10077U *Biokemi 1*.
- 7.5 ECTS in physiology equivalent in content to the human physiology course NNEB19009U *Basal human fysiologi*.
- 7.5 ECTS in statistics equivalent in content to the statistics course LMAB10069U *Statistisk dataanalyse 1*.

For informational purpose: Bachelor's degrees previously assessed as qualifying meeting the specified ECTS

Applicants with a Bachelor's degree in Exercise and Sport Sciences from University of Copenhagen are qualified for admission if the programme includes the following:

- 7.5 ECTS in biochemistry (including laboratory work) equivalent in content to the biochemistry course LKEB10077U *Biokemi 1*.
- 7.5 ECTS in statistics equivalent in content to the statistics course NNEB15001U *Basal statistik i idrætsvidenskab*

Applicants with the following Professional Bachelor's degree:

- Nutrition and Health with the line Health Promotion and Dietetics from University College Copenhagen, VIA University College, University College Absalon or University College South Denmark

are qualified for admission if the programme includes the following:

- 7.5 ECTS in biochemistry (incl. laboratory work) equivalent in content to the biochemistry course LKEB10077U *Biokemi 1*.
- 7.5 ECTS in physiology equivalent in content to the human physiology course NNEB19009U *Basal human fysiologi*.
- 7.5 ECTS in statistics equivalent in content to the statistics course LMAB10069U *Statistisk dataanalyse 1*

4.3 Other applicants

The Faculty may also admit applicants who, after an individual academic assessment, are assessed to possess educational qualifications equivalent to those required in Subclauses 4.1-4.2.

4.4 Language requirements

Applicants must as a minimum document English language qualifications comparable to a Danish upper secondary school English B level or English proficiency corresponding to the tests and scores required. Accepted tests and required minimum scores are published online at www.science.ku.dk.

4.5 Supplementary subject elements

The qualifications of an applicant to the MSc programme are assessed exclusively on the basis of the qualifying Bachelor's degree. Supplementary subject elements passed between the completion of the Bachelor's program and the admission to the MSc programme cannot be included in the overall assessment.

However, subject elements passed before the completion of the Bachelor's program may be included in the overall assessment. This includes subject elements completed as continuing education as well as subject elements completed as part of a former higher education program. A maximum of 30 ECTS supplementary subject elements can be included in the overall assessment.

Subject elements passed before completing the Bachelor's programme which are to form part of the MSc programme to which the student has a legal right of admission (§15-courses) cannot be included in the overall assessment.

5 Prioritisation of applicants

With a Bachelor's degree in Food Science with the Food, Health and Nutrition subject-specific package from University of Copenhagen the student is granted reserved access and guaranteed a place on the MSc Programme in Human Nutrition if the student applies in time to begin the MSc Programme within three years of the completion of the Bachelor's degree.

If the number of qualified applicants to the programme exceeds the number of places available, applicants will be prioritised according to the following criteria:

- Total number of ECTS in courses in natural science
- Grade-point average achieved in qualifying degree.

6 Structure of the programme

The compulsory subject elements, restricted elective subject elements and the thesis constitute the central parts of the programme (Section 30 of the Ministerial Order on Bachelor and Master's Programmes (Candidatus) at Universities).

6.1 Programme components

The programme is set at 120 ECTS and consists of the following:

- Compulsory subject elements 52.5 ECTS.
- Elective subject elements, 22.5 ECTS.
- Thesis, 45 ECTS.

6.1.1 Compulsory subject elements

All of the following subject elements are to be covered (52.5 ECTS):

Course Code	Course Title	Block	ECTS
NNEK23001U	Advanced Nutrition Physiology and Metabolism	Block 1	7.5 ECTS
NNEK23002U	Tools and Techniques in Nutrition Research	Block 1	7.5 ECTS
NNEK23003U	Integrative Human Metabolism	Block 2	7.5 ECTS
NNEK23004U	Lifecourse Nutrition and Health	Block 2	7.5 ECTS
NNEK24016U	Nutrition Related Diseases	Block 3	7.5 ECTS
NNEK23006U	Study Design in Human Nutrition	Block 4	7.5 ECTS
LLEK10249U	Evidence Diet and Health	Block 1	7.5 ECTS

6.1.2 Elective subject elements

22.5 ECTS are to be covered as elective subject elements.

- All subject elements at MSc level may be included as elective subject elements in the MSc Programme.
- BSc subject elements corresponding to 7.5 ECTS may be included in the MSc Programme.
- Projects. See 6.1.4 Projects.

6.1.3 Projects

- Projects outside the course scope may be included in the elective section of the programme with up to 15 ECTS. The regulations are described in Appendix 5 to the shared section of the curriculum.
- Projects in practice may be included in the elective section of the programme with 15 ECTS. The regulations are described in Appendix 4 to the shared section of the curriculum.
- Thesis preparation projects may not be included in the elective section of the programme. The regulations are described in Appendix 6 to the shared section of the curriculum.

6.1.4 Thesis

The MSc Programme in Human Nutrition includes a thesis corresponding to 45 ECTS as described in Appendix 2 to the shared curriculum. The thesis must be written within the academic scope of the programme.

6.1.5 Academic mobility

The curriculum makes it possible to follow subject elements outside the Faculty of Science.

The academic mobility for the MSc Programme in Human Nutrition is placed in blocks 3+4 of the 1st year.

Academic mobility requires that the student follows the rules and regulations regarding pre-approval and credit transfer.

In addition, the student has the possibility to arrange similar academic mobility in other parts of the programme.

7 Exemptions

In exceptional circumstances, the university may grant exemptions from the rules in the curriculum specified solely by the university.

8 Commencement etc.

8.1 Validity

This subject specific section of the curriculum applies to all students enrolled in the programme – see however Appendix 2.

8.2 Transfer

Students enrolled on previous curricula may be transferred to the new one as per the applicable transfer regulations or according to an individual credit transfer by the study board.

8.3 Amendments

The curriculum may be amended once a year so that any changes come into effect at the beginning of the academic year. Amendments must be proposed by the study board and approved by the Dean.

Notification about amendments that tighten the admission requirements for the programme will be published online at www.science.ku.dk one year before they come into effect.

If amendments are made to this curriculum, an interim arrangement may be added if necessary to allow students to complete their MSc Programme according to the amended curriculum.

Appendix 1 The recommended academic progression

The table illustrates the recommended academic progression. The student is allowed to plan an alternative progression within the applicable rules.

Table – General profile in Human Nutrition

	Block 1	Block 2	Block 3	Block 4
1st year	Advanced Nutrition Physiology and Metabolism	Integrative Human Metabolism	Nutrition Related Diseases	Study Design in Human Nutrition
	Tools and Techniques in Nutrition Research	Lifecourse Nutrition and Health	Elective	Elective
2nd year	Evidence, Diet and Health	Thesis		
	Elective			

Appendix 2 Interim arrangements

The Shared Section that applies to all BSc, part-time MSc and MSc Programmes at the Faculty of Science applies to all students.

The interim arrangements below only consist of parts where the current curriculum differs from the rules and regulations that were previously valid. Therefore, if information about relevant rules and regulations are missing, it can be found in the curriculum above.

1 General changes for students admitted in the academic year 2023/24

Students admitted to the MSc programme in the academic year 2023/24 must finish the programme as listed in the curriculum above with the following exceptions.

Table – General profile in Human Nutrition

	Block 1	Block 2	Block 3	Block 4
1st year	Advanced Nutrition Physiology and Metabolism	Integrative Human Metabolism	<i>Diet and Physical Activity in Prevention and Treatment of Disease</i>	Study Design in Human Nutrition
	Tools and Techniques in Nutrition Research	Lifecourse Nutrition and Health	Elective	Elective
2nd year	Evidence, Diet and Health	Thesis		
	Elective			

Courses in italics have been discontinued. See Discontinued courses below.

2 Discontinued courses

Course Code	Course Title	ECTS	Interim arrangement
NNEK23005U	Diet and Physical Activity in Prevention and Treatment of Disease	7.5	The course was compulsory in the academic year 2023/24. Offered for the last time: 2023/24. The course is identical to NNEK24016U Nutrition Related Diseases

Appendix 3 Description of objectives for the thesis

After completing the thesis, the student should have:

Knowledge about:

- Scientific problems within the study programme's subject areas.
- A suitable combination of methodologies/theories based on international research for use in his/her work with the problem formulation.

Skills in/to:

- Apply and critically evaluate theories/methodologies, including their applicability and limitations.
- Assess the extent to which the production and interpretation of findings/material depend on the methodology/theory chosen and the delimitation chosen.
- Assess the credibility of own findings based on relevant data processing.
- Discuss academic issues arising from the thesis.
- Draw conclusions in a clear and academic manner in relation to the problem formulation and, more generally, considering the topic and the subject area.
- Discuss and communicate the academic and social significance, if any, of the thesis based on ethical principles.

Competences in/to

- Initiate and perform academic work in a research context.
- Substantiate the idea of conducting experimental work/producing own data in order to shed light on the topic as formulated in the problem formulation.
- Process data through a choice of academic analysis methods and present findings objectively and in a concise manner.
- Solve complex problems and carry out development assignments