Programme-specific Section of the Curriculum for the MSc Programme in Human Nutrition at the Faculty of Science, University of Copenhagen 2012 (Rev. 2018)

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1 Title, affiliation and language
A shared section that applies to all BSc 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 insight into human nutrition science and related subjects about the optimum function and the prevention of disease, as well as factors affecting public health in a nutritional context.

2.2 General programme profile
The Human Nutrition programme gives the student comprehensive knowledge of the importance of nutrition to human health and a thorough understanding of the principles and methods of nutritional science. The programme comprises the following main subjects: metabolic functions of nutrients, nutrition and health, diet and food culture of the general public, prevention policy and nutrition as well as the importance of the diet in the prevention of the most common widespread diseases such as cardiovascular disease, cancer, obesity, type-2 diabetes and osteoporosis. In the course of the two-year MSc programme, the students will learn about the conversion of energy and nutrients in the human body, the importance of nutrition in the various stages of life, and the effects of nutrition on health and disease through course participation in lectures and exercises, group work and final work on their MSc thesis project. A graduate from the MSc programme in Human Nutrition will be an expert on diet, nutrition and health, and can contribute to handling the global 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
The MSc Programme in Human Nutrition qualifies students to become professionals within business functions and/or areas such as:
• A PhD programme
• Consultancy and guidance.
• Administration and research.
• Education.

Within:
• Manufacturing industries.
• Public authorities.
• Research and educational institutions.

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
On completion of the programme, an MSc in Human Nutrition has acquired the following:

Knowledge about:
• Digestion, absorption, metabolism, regulation and function of nutrients in normal physiological functions.
• The pathogenesis, treatment and prevention of the most important life style related non-communicable disease
• Study designs in relation to human nutrition, and their advantages and limitations
• Methods used in human nutrition study to assess energy requirements and expenditure, food intake, anthropometric measurements, biomarkers of nutrient intake and micronutrient status, and their advantages and limitations
• Theories and strategy in public health science in relation to nutrition and health
• Planning of public health interventions in the field of nutrition, including the roles, interest and responsibilities of central public and private stakeholders
• The diets and nutritional requirements of various population groups, including the interaction between diet and nutritional status.
• The effects of nutrients on growth, development and health.

Skills in/to:
• Apply conventional measuring techniques from nutritional science for the evaluation of nutritional status.
• Apply evidence-based principles of nutritional science in connection with fact-finding.
• Evaluate key methodologies in the field of human nutrition with regard to validity, reliability and applicability.
• Plan, collect and assess dietary data in relation to stated goals.
• Communicate specialist knowledge clearly and precisely – in writing and orally – to other specialists as well as laymen.
• Select and use appropriate information and communications technology in all relevant work processes.
• Summarise theories, methodologies and research finding within the discipline.
• Evaluate and be critical of the scientific literature within the field of human nutrition.

Competences in/to:
• Initiate and manage prevention initiatives, including identifying target groups, setting intervention levels, selecting activities and planning evaluations.
• Identify the players in the health sector and the distribution of responsibilities in Denmark, and participate in mono-disciplinary and interdisciplinary collaboration with these players.
• Apply theories on preventive strategies and interventions in the planning of a health promoting intervention.
• Advise and provide guidance on as well as administer nutrition-related issues and tasks.
• Monitor and consider the many and sometimes contradictory aspects that influence people’s relationship to food today.
• Teach and conduct research in human nutrition.
• Independently assess and organise own learning processes and assume responsibility for own professional development with a view to life-long learning.

4 Admission requirements
With a Bachelor’s degree in Food Science with the Food, Health and Nutrition subject-specific package from the University of Copenhagen the student is granted reserved access and guaranteed a place on the MSc Programme in Human Nutrition if the student applies before the application deadline during the first application period after the completion of the Bachelor’s degree.

4.1 Applicants with a Bachelor’s degree in Food Science
Applicants with a Bachelor’s degree in Food Science with the Food, Health and Nutrition subject-specific package from the University of Copenhagen are directly academically qualified for admission to the MSc program in Human Nutrition

4.2 Applicants with a Bachelor’s degree in Exercise and Sport Sciences
Applicants with a Bachelor’s degree in Exercise and Sport Sciences from the University of Copenhagen may also be admitted if their programme includes all of 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.

4.3 Applicants with a related Bachelor’s degree
Applicants with a Bachelor’s degree within the field of science from the University of Copenhagen or other Danish or international universities may also be admitted if their programme includes the following:

Minimum 120 ECTS within the field of 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 NNEB15012U Menneskets fysiologi.
- 7.5 ECTS in statistics equivalent in content to the statistics course LMAB10069U Statistisk dataanalyse 1.

4.4 Other applicants
The Faculty may also admit applicants who, after an individual academic assessment, are deemed to possess educational qualifications equivalent to those required in Subclauses 4.1-3.

4.5 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.

4.6 Supplementary subject elements
The qualifications of an applicant to the MSc program 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 program 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 BSc programme which are to form part of the MSc programme to which the student has a legal right of admission (§9-courses) cannot be included in the overall assessment.

5 Prioritisation of applicants
If the number of qualified applicants to the programme exceeds the number of places available, applicants will be prioritised as follows:

1) Applicants with a Bachelor’s degree in Food Science with the Food, Health and Nutrition subject-specific course package from the University of Copenhagen seeking admission by way of direct extension of their completed BSc programme.
2) Applicants with a Bachelor’s degree in Food Science with the Food, Health and Nutrition subject-specific course package.
3) Applicants with a Bachelor’s degree in Exercise and Sport Sciences from the University of Copenhagen.
4) Applicants with a related Bachelor’s degree.
5) Other applicants.

If the number of qualified applicants within a category exceeds the number of places available, applicants prioritised according to the following criteria (listed below in prioritised order):

- Total ECTS in science.
- Total ECTS in biochemistry, physiology and statistics multiplied by the grade point average.
- Total ECTS within the area of nutrition.
- Grade point average of the courses within the area of nutrition. If different grading systems make comparison impossible, applicants will be prioritised on the basis of an individual evaluation by the Admission Committee.

6 Structure of the programme
The compulsory subject elements, restricted elective subject elements and the thesis constitute the central parts of the programme (Section 21 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 45 ECTS.
- Restricted elective subject elements, 15 ECTS.
- Elective subject elements, 15 ECTS.
- Thesis, 45 ECTS.

6.1.1 Compulsory subject elements
All of the following subject elements are to be covered (45 ECTS):

<table>
<thead>
<tr>
<th>Subject Element</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLEK10264U</td>
<td>Nutrition Physiology</td>
</tr>
</tbody>
</table>

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6.1.2 Restricted elective subject elements
15 ECTS are to be covered as subject elements from the following list:

<table>
<thead>
<tr>
<th>Code</th>
<th>Subject</th>
<th>Block</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NNEK15005U</td>
<td>Physiological Adaptations to Strength Training</td>
<td>Block 1</td>
<td>7.5 ECTS</td>
</tr>
<tr>
<td>NIFK14026U</td>
<td>Entrepreneurship and Innovation</td>
<td>Block 1</td>
<td>7.5 ECTS</td>
</tr>
<tr>
<td>NFOK16000U</td>
<td>Food Consumer Research</td>
<td>Block 1</td>
<td>7.5 ECTS</td>
</tr>
<tr>
<td>NNEK16003U</td>
<td>Bioactive Food Components and Health</td>
<td>Block 2</td>
<td>7.5 ECTS</td>
</tr>
<tr>
<td>NNEK15000U</td>
<td>Nutrition in Global Health</td>
<td>Block 2</td>
<td>7.5 ECTS</td>
</tr>
<tr>
<td>NNEK17000U</td>
<td>Laboratory Methods in Nutrition</td>
<td>Block 3</td>
<td>7.5 ECTS</td>
</tr>
<tr>
<td>NNEK17001U</td>
<td>Thematic Course: Human Nutrition</td>
<td>Block 3</td>
<td>7.5 ECTS</td>
</tr>
<tr>
<td>LLEK10297U</td>
<td>The Sociology of Food Consumption</td>
<td>Block 3</td>
<td>7.5 ECTS</td>
</tr>
<tr>
<td>NNEK15004U</td>
<td>Nutrition and Physiological Activity for the</td>
<td>Block 4</td>
<td>7.5 ECTS</td>
</tr>
<tr>
<td></td>
<td>Improvement of Health in the Aged</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIFK14026U</td>
<td>Entrepreneurship and Innovation</td>
<td>Block 4</td>
<td>7.5 ECTS</td>
</tr>
<tr>
<td>NFKK14006U</td>
<td>Project in practice</td>
<td>Block 1-5</td>
<td>15 ECTS</td>
</tr>
</tbody>
</table>

6.1.3 Elective subject elements
15 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 outside the course scope may be included in the elective section of the programme by up to 15 ECTS. The regulations are described in Appendix 5 to the shared section of the curriculum.

Projects in practice may not exceed 15 ECTS in total of the programme. Project in practice may be written as a combination of the restricted elective and elective section of the programme. The regulations are described in Appendix 4 to the shared section of the curriculum.

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

6.2.4 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 block 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 Tables

### Table – General profile in Human Nutrition (thesis, full time)

<table>
<thead>
<tr>
<th></th>
<th>Block 1</th>
<th>Block 2</th>
<th>Block 3</th>
<th>Block 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1st year</strong></td>
<td>Nutrition Physiology</td>
<td>Evidence, Diet and Health</td>
<td>Restricted elective</td>
<td>Public Health and Nutrition</td>
</tr>
<tr>
<td></td>
<td>Nutrition Related Diseases</td>
<td>Experimental Nutrition Physiology</td>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td><strong>2nd year</strong></td>
<td>Nutrition, Growth and Development</td>
<td></td>
<td>Thesis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Restricted elective</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 (thesis, part time)

<table>
<thead>
<tr>
<th></th>
<th>Block 1</th>
<th>Block 2</th>
<th>Block 3</th>
<th>Block 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1st year</strong></td>
<td>Nutrition Physiology</td>
<td>Evidence, Diet and Health</td>
<td>Restricted elective</td>
<td>Public Health and Nutrition</td>
</tr>
<tr>
<td></td>
<td>Nutrition Related Diseases</td>
<td>Experimental Nutrition Physiology</td>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td><strong>2nd year</strong></td>
<td>Nutrition, Growth and Development</td>
<td></td>
<td>Thesis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Restricted elective</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The table illustrates the recommended academic progression. The student is allowed to plan an alternative progression within the applicable rules.
Appendix 2 Interim arrangements

The Shared Section of the BSc and MSc Curricula for Study Programmes 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 2016/17

Students admitted to the MSc Programme in the academic year 2016/17 must finish the programme as listed in the curriculum above with the following exceptions.

Restricted elective subject elements

15 ECTS may be covered by subject elements from the following list:

- Restricted elective subject elements offered as part of the of this curriculum (see above)
- NNEK16000U Applied Biostatistics in Nutrition and Physiology Block 2 7.5 ECTS
- LLEK10204U Thematic course: Human Nutrition Discontinued* 15 ECTS

* See course specific changes below.

2 General changes for students admitted in the academic year 2015/16

Students admitted to the MSc Programme in the academic year 2015/16 must finish the programme with the original curriculum structure under which they were admitted.

Structure of the programme

For students admitted in the academic year 2015/16 the programme consists of the following:

- Basic study programme, 30 ECTS.
- Specialisation, 90 ECTS, including the thesis.

The programme is unchanged in the academic content in the current curriculum but in 2015/16 the students had to choose a specialisation before the end of the basic study programme in block 2, 1st year.

3 Course specific changes

<table>
<thead>
<tr>
<th>Discontinued course</th>
<th>Interim arrangement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioactive Components and Health (NNEK1400U), 7.5 ECTS</td>
<td>The course was offered for the last time in the academic year 2015/16. The course is identical to Bioactive Food Components and Health (NNEK16003U), 7.5 ECTS</td>
</tr>
<tr>
<td>Thematic Course: Human Nutrition (LLEK10204U), 15 ECTS</td>
<td>The course was restricted elective in the academic year 2016/17. The course was offered for the last time in the academic year 2016/17 and a third exam is offered in the academic year 2017/18.</td>
</tr>
</tbody>
</table>
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.
- Theories/models on the basis of an organised value system and with a high degree of independence.

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 theory/methodology chosen and the delimitation chosen.
- 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.
- 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.
- Assess the credibility of own findings based on relevant data processing.

Competences in/to
- Initiate and perform academic work in a research context.
- Solve complex problems and carry out development assignments in a work context.