



Programme-specific Section of the Curriculum for the MSc Programme in Food Innovation and Health at the Faculty of Science, University of Copenhagen 2012 (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 Food Innovation and Health leads to a Master of Science (MSc) in Food Innovation and Health with the Danish title: *Cand.scient. (candidatus/candidata scientiarum) i fødevareinnovation og sundhed*.

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 purpose of the MSc in Food Innovation and Health programme is to educate graduates on a basis of natural and nutritional sciences that are able to independently apply, develop and communicate knowledge in the cross-field between food, health, innovation and sustainability. To do so, graduates will be educated in innovation, entrepreneurship, food science, nutrition and elements of social science. The education is research-based, has a high academic level and is interdisciplinary.

2.2 General programme profile

The programme comprises of the following main subjects: A scientific approach to gastronomy in theory and practice, food chemistry and culinary techniques, basic nutrition, consumer preferences and behaviour, sensory science, sustainability, food and meals in a cultural and societal context, marketing, as well as innovation and entrepreneurship. The skills acquired throughout the initial courses in the programme are combined in a thematic course and in the MSc thesis. Through lectures, project work and cases, the students acquire academic and practical knowledge as well as analytical and methodological qualifications.

Food innovation and health are the key subject areas 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 Food Innovation and Health qualifies students to become professionals within business functions and/or areas such as:

- A PhD programme

- Product development, innovation and consultancy in companies (both large- and small-scale producers), institutions, and mass caterers within the food sector.
- To start up new business ventures.
- Advice companies in the food sector.
- Teaching and research in the field of gastronomy, sustainable production and consumption, health and innovation.

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 Food Innovation and Health have acquired the following:

Knowledge about:

- The scientific methodologies and theories used in the disciplines of the programme.
- Innovation and entrepreneurship in relation to food product development.
- Consumer behavior and how it relates to health and sustainability challenges.
- The metabolic and physiological functions of nutrients and other bioactive food components.
- Consumer oriented innovation on food products and related services.
- The role of food marketing on consumer decision making.
- Key social and cultural aspects that influence people's relationship to food.
- Gastronomy as a scientific discipline, including culinary techniques at a practical and theoretical level.
- Ethical and scientific issues, including good practice in human testing and during laboratory work as well as data protection (GDPR).

Skills in/to:

- Apply qualitative and quantitative study designs and techniques used within social science and sensory science in relation to food and health.
- Apply principles of experimental design and statistical evaluation of consumer information.
- Use of transparent and reproducible data analytical tools for the analysis of data.
- Assess key methodologies in the fields related to food studies with regard to validity, reliability and applicability.
- Conduct consumer-centered research in relation to food.
- Utilize web-based solutions for consumer profiling.
- Be able to use consumer research to support marketing strategies in food companies.
- Assess the quality of products and raw materials on the basis of gastronomic, sensory and nutritional principles.
- Identification of factors influencing sustainability of foods and meals from production to consumption, including food waste and side streams.
- Apply knowledge about bioactive components, appetite and metabolism to optimise nutritional and/or functional aspects of food products and diet.
- Apply the principles of innovation and entrepreneurship in business development.
- Work as intra- and entrepreneur.
- Involve stakeholders in innovation processes and communicate ideas to decision makers.

- Apply design thinking principles to the development of novel food products.
- Communicate own specialist knowledge clearly, precisely and ethically sound – in writing and orally – to various target groups considering the impact of digitalization of the communication and dissemination.

Competences in/to:

- Design, plan and implement consumer studies using relevant digital tools for data collection, data handling and analysis.
- Plan and implement innovation and its related processes in relation to food and health.
- Synthesise and test theories, principles and research findings in relation to food and health.
- Facilitate communication and understanding between scientists, gastronomers and industry partners.
- Understand and evaluate consumer behaviour in relation to food and meal acceptance.
- Use research-based consumer knowledge to discuss consumer issues and strategies with both marketing and business development in food companies.
- Develop new palatable, sustainable and healthy food products, food services and meals.
- Work independently and cooperate both within and across disciplines.
- Thoroughly search for scientific literature using relevant databases and critically assess the different sources and evidence in the fields relevant to food innovation and health.
- Independently assess and organise own learning processes and assume responsibility for own professional development with a view to life-long learning.
- Understand and describe food consumer research data collection methods (e.g. quantitative, qualitative and mixed methods).

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 Food Innovation and Health:

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

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 Food Innovation and Health if the programme includes the following:

- A minimum of 120 ECTS within the area of natural science including all the following:
 - Biochemistry (including laboratory work) equivalent in content to the SCIENCE course LKEB10077U *Biokemi 1* 7.5 ECTS
 - Statistics equivalent in content to the SCIENCE course LMAB10069U *Statistisk dataanalyse 1* 7.5 ECTS

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 4.1-2.

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 programme 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 programme 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 course package from University of Copenhagen the student is granted reserved access and guaranteed a place on the MSc Programme in Food Innovation and Health 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 within the area of natural science

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, 60 ECTS.
- Elective subject elements, 15 or 30 ECTS.
- Thesis, 30 or 45 ECTS.

6.1.1 Compulsory subject elements

All of the following subject elements are to be covered (60 ECTS):

Course Code	Course Title	Block	ECTS
NFOK18000U	Determinants of Food Consumption	Block 1	7.5 ECTS
NNEK23001U	Advanced Nutrition Physiology and Metabolism	Block 1	7.5 ECTS

NFOK23000U	Food and Meal Consumer Research	Block 4	7.5 ECTS
NFOK14031U	Thematic Course in Food Innovation and Health	Block 1	15 ECTS
NNEK16003U	Bioactive Food Components and Health	Block 2	7.5 ECTS
NFOK13004U	Food Science and Culinary Techniques	Block 2	7.5 ECTS
NIFK14026U	Entrepreneurship and Innovation	Block 4	7.5 ECTS

6.1.3 Elective subject elements

15 or 30 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 15 ECTS may be included in the MSc Programme.
- Projects. See 6.1.4 Projects.

6.1.4 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 up to 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.

6.1.5 Thesis

The MSc Programme in Food Innovation and Health includes a thesis corresponding to 30 or 45 ECTS, as described in Appendix 2 to the shared curriculum. The thesis must be written within the academic scope of the programme.

6.1.6 Academic mobility

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

The academic mobility in the MSc Programme in Food Innovation and Health 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 study board may grant exemptions from the rules in the curriculum specified solely by the Faculty of Science.

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 Amendment

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 – MSc Programme in Food Innovation and Health (Thesis 30 ECTS)

	Block 1	Block 2	Block 3	Block 4
1st year	Determinants of Food Consumption	Bioactive Food Components and Health	Elective	Food and Meal Consumer Research
	Advanced Nutrition Physiology and Metabolism,	Food Science and Culinary Techniques	Elective	Entrepreneurship and Innovation
2nd year	Thematic Course in Food Innovation and Health	Elective	Thesis	
		Elective		

Table – MSc Programme in Food Innovation and Health (Thesis 45 ECTS)

	Block 1	Block 2	Block 3	Block 4
1st year	Determinants of Food Consumption	Bioactive Food Components and Health	Elective	Food and Meal Consumer Research
	Advanced Nutrition Physiology and Metabolism	Food Science and Culinary Techniques	Elective	Entrepreneurship and Innovation
2nd year	Thematic Course in Food Innovation and Health	Thesis		

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 2021/22 and 2022/23

Students admitted to the MSc Programme in the academic year 2021/22 and 2022/23 must finish the programme as listed in the curriculum above with the following exceptions:

Table – MSc Programme in Food Innovation and Health (Thesis 30 ECTS)

	Block 1	Block 2	Block 3	Block 4
1st year	Determinants of Food Consumption	Bioactive Food Components and Health	Elective	Food Consumer Research
	Nutrition Physiology	Food Science and Culinary Techniques	Elective	Entrepreneurship and Innovation
2nd year	Thematic Course in Food Innovation and Health	Elective	Thesis	
		Elective		

Courses in italics are discontinued. See discontinued courses.

Table – MSc Programme in Food Innovation and Health (Thesis 45 ECTS)

	Block 1	Block 2	Block 3	Block 4
1st year	Determinants of Food Consumption	Bioactive Food Components and Health	Elective	Food Consumer Research
	Nutrition Physiology	Food Science and Culinary Techniques	Elective	Entrepreneurship and Innovation
2nd year	Thematic Course in Food Innovation and Health	Thesis		

Courses in italics are discontinued. See discontinued courses.

2 General changes for students admitted in the academic year 2020/21

Students admitted to the MSc Programme in the academic year 2020/21 must finish the programme as listed in the curriculum above with the following exceptions:

Table - MSc Programme in Food Innovation and Health

	Block 1	Block 2	Block 3	Block 4
1st year	Determinants of Food Consumption	Bioactive Food Components and Health	Elective	Food Consumer Research

	<i>Nutrition Physiology</i>	Food Science and Culinary Techniques	Elective	Entrepreneurship and Innovation
2nd year	Thematic Course in Food Innovation and Health	Elective	Thesis	
		Elective		

Courses in italics are discontinued. See discontinued courses.

3 Discontinued courses

Course Code	Course Title	ECTS	Interim arrangement
LLEK10264U	Nutrition Physiology	7.5	The course was compulsory in the academic year 2022/23 and earlier. The course is replaced by the course NNEK23001U Advanced Nutrition Physiology and Metabolism, 7.5 ECTS
NFOK16000U	Food Consumer Research	7.5	The course was compulsory in the academic year 2022/23 and earlier. The course is replaced by the identical course NFOK23000U Food and Meal Consumer Research, 7.5 ECTS

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.

If the thesis includes experimental content/own data production, the student will also be able to:

- 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.