LUND UNIVERSITY

LTH
FACULTY OF ENGINEERING

# Programme Syllabus

# Master's Programme in Food Systems

- Faculty: Faculty of Engineering, LTH
- Programme code: TALSA
- Credits: 120
- Admission level: Bachelor's degree
- Degree level: Second cycle
- Approved by: Carl Grey
- Approval date: 17 February 2026
- Validity: Academic year 2026/2027
- Entry into force: 17 February 2026

## 1 Aim and outcomes

### 1.1 Aim

The aim of the MFS programme is to prepare students to drive a future transformation of the food system and increase the competitiveness of their future employing companies. The MFS programme promotes a deep knowledge of the food system as an integrated value chain by providing students with the opportunity to study consecutively at three academic institutions which provide distinctly different semester blocks, each one of them focusing on specific areas of the food system. This is coupled with a partner-mentored project/thesis work and non-academic activities offered by industrial partners. In addition, pan-European activities at industrial partner sites will ensure bonding of the international cohort, and facilitate the creation of an international alumni network, with alumni activities offered by EIT Food. The programme will create a class of students that covers the food system in its entirety, with graduates having a holistic systems type knowledge along with skills sets,

providing, at the same time, selective knowledge within the food system by being able to customize their particular master programme.

## 1.2 Outcomes for a Degree of Master of Science (120 credits)

(Higher Education Ordinance 1993:100)

**Knowledge and understanding**

For a Degree of Master of Science (120 credits) the student shall

- demonstrate knowledge and understanding in the main field of study, including both broad knowledge of the field and a considerable degree of specialised knowledge in certain areas of the field as well as insight into current research and development work, and
- demonstrate specialised methodological knowledge in the main field of study.

**Competence and skills**

For a Degree of Master of Science (120 credits) the student shall

- demonstrate the ability to critically and systematically integrate knowledge and analyse, assess and deal with complex phenomena, issues and situations even with limited information,
- demonstrate the ability to identify and formulate issues critically, autonomously and creatively as well as to plan and, using appropriate methods, undertake advanced tasks within predetermined time frames and so contribute to the formation of knowledge as well as the ability to evaluate this work,
- demonstrate the ability in speech and writing both nationally and internationally to report clearly and discuss his or her conclusions and the knowledge and arguments on which they are based in dialogue with different audiences, and
- demonstrate the skills required for participation in research and development work or autonomous employment in some other qualified capacity.

**Judgement and approach**

For a Degree of Master of Science (120 credits) the student shall

- demonstrate the ability to make assessments in the main field of study informed by relevant disciplinary, social and ethical issues and also to demonstrate awareness of ethical aspects of research and development work,
- demonstrate insight into the possibilities and limitations of research, its role in society and the responsibility of the individual for how it is used, and
- demonstrate the ability to identify the personal need for further knowledge and take responsibility for his or her ongoing learning.

# 2 Programme structure

The programme includes 90 credits courses and a degree project (30 credits).

## 2.1 First semester - Lund University, Sweden

### 2.1.1 LTH

Mandatory courses (advanced level)

- KLGN70 Introduction to the Food Systems 7,5 credits
- KLGN65 Sustainable Food Processing and Packaging 7,5 credits

Elective mandatory courses (advanced level)

- KLGN20 Food Engineering 7,5 credits
- KLGN30 Food Chemistry and Nutrition 7,5 credits
- MTTN35 Packaging Logistics 7,5 credits
- MTTN40 Packaging Technology and Development 7,5 credits
- MTTN56 Packaging Material Sciences 7,5 credits

## 2.2 Second and third semester

### 2.2.1 Track 'Sustainable Food Processing, Circular Food Systems & Future Foods'

Semester 2. University of Turin, Italy

Mandatory courses

- Sustainable Bioprocesses in the Food System 7,5 credits
- Circular Economy Management 7,5 credits
- Green Extraction Technologies and By-products Valorisation 7,5 credits
- Entrepreneurship and Innovation in the Food System 7,5 credits

Semester 3. Aarhus University, Denmark

Mandatory courses

- Innovative and Organic Production of Fruits and Vegetables 7,5 credits
- Emerging Technologies Business Case Study 7,5 credits

Elective mandatory courses

- Project Work in Sensory Science 5 credits
- Future Animal-based Food 5 credits
- Food, Consumer and Innovation 5 credits
- Food Informatics 5 credits

### 2.2.2 Track 'Sustainable Food Processing, Public Health Nutrition and the Consumer & Future Foods'

Semester 2. University of Reading, United Kingdom

Mandatory courses

- Public Health Nutrition and Consumer Food Choice 10 credits
- Food Product re-formulation 10 credits
- Clinical Nutrition 10 credits
- Entrepreneurship and Innovation in the Food System 7,5 credits

Semester 3. Aarhus University, Denmark

Mandatory courses

- Innovative and Organic Production of Fruits and Vegetables 7,5 credits
- Emerging Technologies Business Case Study 7,5 credits

Elective mandatory courses

- Project Work in Sensory Science 5 credits
- Future Animal-based Food 5 credits
- Food, Consumer and Innovation 5 credits
- Food Informatics 5 credits

#### 2.2.3 Track 'Sustainable Food Processing, nutrition and health'

Semester 2. University of San Pablo CEU, Spain

Mandatory courses

- Nutrition and Health 7,5 credits
- Public Health Nutrition and Sustainability 7,5 credits
- Entrepreneurship and Innovation in the Food System 7,5 credits

Elective mandatory courses

- Precision Nutrition 7,5 credits
- Principles of Human Nutrition 7,5 credits

Semester 3. Aarhus University, Denmark

Mandatory courses

- Innovative and Organic Production of Fruits and Vegetables 7,5 credits
- Emerging Technologies Business Case Study 7,5 credits

Elective mandatory courses

- Project Work in Sensory Science 5 credits
- Future Animal-based Food 5 credits
- Food, Consumer and Innovation 5 credits
- Food Informatics 5 credits

### 2.3 Fourth semester

The last semester consists of the degree project (30 credits) conducted in Lund, for the students who studied the first semester in Lund.

## 2.4 Incoming students semester 2 and 3

Students admitted to semester 1 at one of the partner universities are given the opportunity to follow fixed tracks and then study courses at LTH according to courses in the Curriculum.

### 2.4.1 Incoming students semester 2

Mandatory courses (advanced level)

- KLGN65 Sustainable Food Processing and Packaging 7,5 credits
- KLGN15 The Relationship between Food Industry, Society and Consumers 7,5 credits
- KLGN75 Entrepreneurship and Innovation in the Food System 7,5 credits

Elective mandatory courses

- KLGN25 Food Technology for Formulation 7,5 credits
- KMBN15 Quality and Product Safety 7,5 credits

### 2.4.2 Incoming students semester 3

Mandatory courses (advanced level)

- KLGN80 Emerging Technologies Business Case Study 7,5 credits
- KLGN65 Sustainable Food Processing and Packaging 7,5 credits

Elective mandatory courses (advanced level)

- KLGN20 Food Engineering 7,5 credits
- KLGN30 Food Chemistry and Nutrition 7,5 credits
- MTTN35 Packaging Logistics 7,5 credits
- MTTN40 Packaging Technology and Development 7,5 credits
- MTTN56 Packaging Material Sciences 7,5 credits

## 2.5 Further studies

Students who have achieved a second cycle exam (Master of Science) will have general entry requirements for third cycle educations.

# 3 Admission requirements

Application to the programme is made by EIT portal with support from partner Universities. https://mfs-apply.eitfood.eu

To be eligible for the Master programme applicants are required to have a Bachelor of Science (B.Sc. or a nationally recognized degree equivalent to 180 ECTS) in these fields:  Agricultural Sciences, Biotechnology, Food Science, Chemistry, Food Safety or Nutrition. English 6.

# 4 Degree

## 4.1 Degree requirements

For a Degree of Master of Science (120 credits) students must successfully complete courses comprising 120 credits, including a degree project worth 30 credits. At least 90 credits must be second-cycle credits and at least 60 credits of those must be in the main field of study, including the degree project.

## 4.2 Degree and degree certificate

When students have completed the degree requirements, they are entitled to apply for a Degree of a Master of Science (120 credits). Main Field of Study: Food Systems.