



AERES
UNIVERSITY OF
APPLIED SCIENCES
ALMERE

Food Systems Innovation

Master's degree

COURSE CATALOGUE

Academic year 2022-2023

CROHO: ?? ISCED: ??

Content

1	Introduction	5
1.1.	Program content and focus	5
1.2.	Program structure	5
1.3.	Development & Admission	5
1.4.	General information Aeres Group	6
2	Programmatic Assessment & Final Qualifications	7
3	Program structure	9
4	Curriculum outline	10
4.1.	Module 1	10
4.2.	Module 2	11
4.3.	Module 3	12
4.4.	Module 4	13
4.5.	Module 5	14
4.6.	Module 6	15
5	Year schedule MFSI 2022-2023*	16

1 Introduction

This is the course catalogue for the 1-year international Food Systems Innovation master's programme (MFSI) for the academic year of 2022-2023, registered under the Dutch **CROHO ?? and ISCED ??**. This catalogue contains all official information about the programme and is therefore leading. During the course, detailed information will be presented on Canvas, our online learning environment. The language of instruction, exams and assessments of this programme is English at all times. Students graduating from this programme receive a Master of Science (MSc) from Aeres University of Applied Sciences. MFSI is a 1-year, fulltime program, which equals 60 ECTS.

1.1. Program content and focus

Our present-day food system is under pressure. To guarantee the availability of sufficient, sustainable and healthy food in a healthy living environment in the long term, the transition to a new, climate-neutral and circular food system is required. For this transition, we need bridge-builders: leaders who can think and act systemically and work across various fields of expertise, to promote creative solutions. During this master you gain the knowledge and skills needed to become a T-shaped professional: both generalist and specialist, deploying your specialist knowledge in an integral and interdisciplinary manner and developing and implementing innovative routes to solutions.

You learn to point out challenges, recognise and valorise opportunities for innovation and facilitate transdisciplinary cooperation. You do this by working on existing food issues from practice with various actors and interests. This way, the Food Systems Innovation master trains you to become a professional that connects large-scale systemic thinking with concrete professional fields within the food system.

1.2. Program structure

The study programme is divided into different phases, from introducing, in which you get acquainted with transitions theory and systemic thinking, to experiencing, exploring, intervening and creating. These phases support you in becoming the expert that is able to apply new insights, explore food systems, design interventions and create new solutions.

During these phases, theoretic knowledge on i.a. food system transitions, challenges and perspectives is combined with training for professional skills, ranging from design-based research to project management and from entrepreneurship to leadership. You learn to point out challenges, recognise and valorise opportunities for innovation and facilitate transdisciplinary cooperation.

Application and experimentation are a common thread through the complete curriculum: the knowledge and skills gained are applied and tested in a series of stimulating assignments, often related to real-life challenges. A central role is reserved for reflection and feedback, captured in your portfolio, to monitor your learning process and grow your capacity for continuous development.

1.3. Development & Admission

At Aeres UAS both professional and personal development are extremely important. We believe in personal education, not in numbers. That is the main reason why, in this Master's degree, programmatic assessment plays a major role, as opposed to conventional grading (see chapter 2 below). To ensure a learning environment at MSc level, all students that enter the MFSI program have to comply with the following criteria.

- To have completed a University of Applied Sciences (UAS bachelor study programme (national or international) on the subject of food. For example: Food Technology, Food Commerce, Food Innovation, Food and Health, Food and business and Agribusiness;
- If you have not completed one of the bachelor's programmes mentioned above or a similar programme, you may be admitted under certain circumstances. Whether you will be admitted depends on your motivation and your knowledge of food systems, health and ecology or the circular economy
- to have a minimum score of 575 in the TOEFL English test or a formally recognized equivalent

1.4. General information Aeres Group

The Dutch green sector is at the forefront of the world. Aeres significantly contributes to this position. At Aeres, education, research and entrepreneurship come together around these major themes. Our talent ensures that there are people who take responsibility for the sustainable growth of plants and animals, feeding people, creating a healthy environment and giving room to nature (Aeres, 2020).

Aeres was created between 2004 and 2009 from mergers of the former Groenhorst College, the CAH University of Applied Sciences, Stoas University of Applied Sciences and PTC+ (now Aeres Tech and Aeres Training Centre). In 2013, the CAH and Stoas merged to form CAH Vilentum University of Applied Sciences, thereby founding three current Aeres University of Applied Sciences faculties in Dronten, Almere and Wageningen. Aeres provides education (pre-vocational secondary education, TVET, Bachelor and Master) and is also active in the field of applied research and innovation and commercial courses and services for individuals and businesses (Aeres, 2020).

Aeres consists of schools, commercial courses and training centers and institutes specialized in supporting services:

- Aeres University of Applied Sciences and Teacher Education. The university has three faculties which are named after the location they are established in: Almere, Dronten and Wageningen. Almere has a primary focus on urban issues and food; Dronten is the agricultural faculty; Wageningen the educational one.
- Aeres vocational education has seven schools in the center of the Netherlands. They all have their own profile, including Pet care, Flower and garden, Arable farming, Animal husbandry, Outdoor, Design, Science and Food.
- Eight schools of pre-vocational secondary education.
- Aeres Tech is a practical training centre for refrigeration and Engineering.
- Aeres Agri Training Centre for Arable Farming, Animal Husbandry (Dairy and Equine) and Horticulture.

Aeres Group Executive Board of directors consists of: Mr. B.M.P. Pellikaan (chairman), Mr. M.H.C. Komen (member).

For more info about Aeres Group please visit: <https://www.aeres.eu/>

2 Programmatic Assessment & Final Qualifications

Specifically for MFSI, Aeres has chosen to mostly work with programmatic assessment as opposed to conventional grading. This means that, throughout the program, each student will work on 5 relevant Final Qualifications (FQs). These FQs are further divided into multiple Learning Outcomes (LOs), on which the student will collect feedback from his/her lecturers, internship commissioners and peers. Together with his/her tutor, during various 'low stakes' moments, the student will monitor and reflect upon his/her progress, and make plans for further progression towards meeting the FQs.

The academic year ends with a 'high stakes' moment, in which the student will show how he/she has developed on all 5 FQs towards becoming the changemaker in the food system he/she wants to be. If the student is able to present sufficient evidence for this, he/she will receive all 60 ECTS.

Final Qualifications and Learning outcomes for 2022-2023 are shown below:

MFSI - Final Qualifications and according Learning Outcomes 2022-2023

Final Qualification 1
The student thinks systemically in complex situations in food systems
The student...
LO1A demonstrates knowledge about theories of system thinking
LO1B applies system thinking to understand transitions in the food system
LO1C analyses a complex multilevel food system challenge from a transitional perspective
Final Qualification 2
The student approaches complex food system challenges in different contexts involving all stakeholders
The student...
LO2A involves relevant stakeholders in relation to (project) goals
LO2B acts upon various cultural, geographical and historical contextual factors influencing food system challenges
LO2C integrates a well-grounded analysis of stakeholders and contexts in an action plan
Final Qualification 3
The student distils the challenges in the food system from different perspectives and at different scale levels
The student...
LO3A evaluates food system challenges as defined by different normative frameworks and future visions
LO3B compares the impact of food system challenges at different scale levels
LO3C integrates different visions and perspectives
Final Qualification 4
The student develops and implements solutions that contribute to fundamental food system change towards sustainability
The student...
LO4A weighs the trade-offs and ethical consequences of transition pathways
LO4B translates challenges to possible interventions for solutions
LO4C creates innovative solutions as an answer to current food system challenges
Final Qualification 5

The student applies relevant skills to contribute to science based innovation in the food system as a professional and creative change maker

The student...

LO5A applies design based and science driven research skills

LO5B demonstrates and reflects upon professional skills

3 Program structure

The following section deals with the contents of the program in more detail. One ECTS corresponds with a study load of 28 hours, so 60 ECTS corresponds with 1680 hours of study load in total. This means that this Master’s program is fulltime, and students are encouraged not to work more than 8 hours/week on the side.

The academic year is divided in 3 trimesters, each consisting of 2 modules that are followed simultaneously. Each module contains several courses and trainings. Each of those serves as a data point in which feedback is collected for programmatic assessment. The Bootcamp and City Study Tour are two unique courses in the program since they are both fulltime and at external locations throughout Europe. The last trimester includes room for an internship and writing a Masterproof. Every week, a tutor meeting is scheduled to work on further professional and personal development.

MFSI Curriculum overview

Year (60 EC)	1					
Period	1		2		3	
Module	Module 1	Module 2	Module 3	Module 4	Module 5	Module 6
Name	Introducing	Experiencing	Exploring	Creating	Internship	Masterproof
Knowledge translation & integration	<i>Theories of transition in food systems</i> <i>Boot camp</i>	<i>Transdisciplinary assignment</i> <i>City Study Tour</i>	<i>Food system challenges</i> <i>Cross-over internship</i>	<i>Interventions & solutions (health, ecology, food security, sustainable economy)</i>	<i>Internship</i>	<i>Masterproof</i> <i>Food System Innovator Festival</i>
Trainings	<i>Science based innovation</i> <i>MOOC</i>		<i>Reflexive professionals</i> <i>Creative intervention design</i>			
Tutorship	<i>Tutorship</i>					

4 Curriculum outline

4.1. Module 1

Module 1: Introducing Food Systems			
MINT			
Coordinator:	Henk Renting		Total study load (h): 255
Module element	Study load (h)	Name	
MINT01	32	Boot camp	
MINT02	110	Theories of transition in food systems	
MINT03	110	Science-based innovation	
MINT04	15	Tutorship	
Entry requirements	A Bachelor degree in a study related to Food		
Methods	Boot camp, lectures, field visits, case study work		
Professional role	Interdisciplinary researcher		
Theme's			
Theories of transition and innovation	<ul style="list-style-type: none"> Theories of system thinking and innovation Transition theories Power and stakeholder roles in innovation networks 		
Food systems	<ul style="list-style-type: none"> Historical perspectives on agri-food systems Food system approaches Urban and City-region food systems 		
Science Based Innovation	<ul style="list-style-type: none"> Design-based research approaches Quantitative research methods Qualitative research methods 		
Data points	Learning activity or assignment	Learning outcomes	
Personal reflection	<ul style="list-style-type: none"> Reflection on how to become a changemaker 	5B	
Results and own analysis of knowledge exam	<ul style="list-style-type: none"> Knowledge exam on theories of system thinking and urban food systems 	1A 1B	
Expert teacher and test respondents feedback on product	<ul style="list-style-type: none"> Professional product: Worked out proposal of a mixed method approach with tested examples of diverse methods 	1B 5A	
Low stake	Learning activity	Learning outcomes	
Evaluation moment with tutor about student progress	Preparation of evaluation moment, based on portfolio input and personal action plan	All above mentioned	
Final qualification(s)			
<i>The student...</i>			
FQ1. thinks systemically in complex situations in food systems. FQ5. applies relevant skills to contribute to science-based innovation in the food system as a professional and creative change maker.			
Costs: Additional costs of the Boot Camp are approximately 200 Euros per student			

4.2. Module 2

Module 2: Experiencing			
MEXP			
Coordinator:	Marieke Creemers	Total study load (h):	215

Module element	Study load (h)	Name
MEXP01	105	Transdisciplinary Assignment
MEXP02	65	City Study Stour
MEXP03	30	MOOC
MEXP04	15	Tutorship

Entry requirements	None	
Methods	Lectures; trainings; workshops; case study work; excursions; tutorship	
Professional role	Agile Project Leader	
Theme's		
Stakeholders & the food system	<ul style="list-style-type: none"> Students learn how to communicate meaningfully with stakeholders of all backgrounds Students learn to collaborate with stakeholders of all backgrounds Students learn to involve relevant stakeholders into project goals 	
Contexts & the food system	<ul style="list-style-type: none"> Students learn to analyse the impact of cultural, geographical and historical contextual factors Students learn to integrate context factors in an action plan towards project goals 	
Professional skills	<ul style="list-style-type: none"> Students learn to demonstrate project management skills Students learn to demonstrate entrepreneurial skills Students learn to apply methods of intercultural communication Students learn to apply methods of change management Students learn to develop areas of interest / skill & knowledge gaps 	
Data points	Learning activity or assignment	Learning outcomes
Dp 4. 360° feedback	An action plan for a real-life challenge, with demonstrable use of a set of professional skills, that integrates and involves stakeholders and contexts.	2A 2B 2C 5B
Dp 5. Feedback of expert, peers, participants	A transition pathway for solutions based on an analysis food system challenges, contexts and stakeholders in a specific urban context.	2A 2B
Dp 1. Personal reflection	Selecting and attending a MOOC of choice that targets a knowledge or skill need or void.	5B
Dp 13. Personal Reflection	Personal transitional leadership development strategy in a self-chosen format.	5B
Low stake	Learning activity	Learning outcomes
Evaluation moment with tutor about student progress	Preparation of evaluation moment, based on portfolio input and personal action plan	All above mentioned
Final qualification(s)		
<i>The student...</i>		
FQ2. approaches a complex food system challenge from different perspectives involving all stakeholders.		
FQ5. applies relevant skills to contribute to science based innovation in the food system as a professional and creative change maker.		
Costs: n/a		

4.3. Module 3

Module 3: Exploring			
MLOR			
Coordinator:	Marjan de Boer	Total study load (h):	315

Module element	Study load (h)	Name
MLOR01	110	Food System Challenges
MLOR02	110	Cross-Over Internship
MLOR03	80	Reflexive Professional
MLOR04	15	Tutorship

Entry requirements	None	
Methods	Lectures, case study work, training, workshops, workvisits and internship	
Professional role	Strategic Advisor	
Theme's		
Food System Challenges	<ul style="list-style-type: none"> • Normative frameworks • The SDG framework in practice 	
Cross-Over Internship	<ul style="list-style-type: none"> • Experience different areas of expertise • Experience different working environments 	
Reflexive Professional	<ul style="list-style-type: none"> • Transitional leadership • Strategic advice 	
Data points	Learning activity or assignment	Learning outcomes
Feedback of expert teacher and peers	<ul style="list-style-type: none"> • Professional product: Strategic advice in a self chosen (multimedia) form related to the cross-over internship 	1C 3B 3C 5B
360 Degree Feedback	<ul style="list-style-type: none"> • During the internship, the student gains experience in the practical field of an unfamiliar, domain and learns to translate knowledge from previous programmes to a new environment. 	1C 3A 3B 3C 5B
Feedback of invited representatives, expert teacher and peers	<ul style="list-style-type: none"> • Organisation of a minisymposium with presentations of results and insights from work visits and a panel discussion with representatives from the visited organisations. 	3A 3B 3C 5B
Low stake	Learning activity	Learning outcomes
Evaluation moment with tutor about student progress	Preparation of evaluation moment, based on portfolio input and personal action plan	All above mentioned
Final qualification(s)		
<i>The student...</i>		
FQ1. thinks systemically in complex situations in food systems.		
FQ3. distils the challenges in the food system from different perspectives and at different scale levels.		
FQ5. applies relevant skills to contribute to science based innovation in the food system as a professional and creative change maker.		
Costs: Approximately 50 Euros (travel costs)		

4.4. Module 4

Module 4: Creating			
MCRE			
Coordinator:	Marjan de Boer	Total study load (h):	235

Module element	Study load (h)	Name
MCRE01	110	Interventions & Solutions
MCRE02	110	Creative Intervention Design
MCRE03	15	Tutorship

Entry requirements	None	
Methods	Lectures, case study work, training, workshops	
Professional role	Creative Innovator	
Theme's		
Interventions & Solutions	<ul style="list-style-type: none"> The problems the food system is facing are diverse and include many themes. In this course, four main themes are distilled; health, ecology, food security and sustainable business models. Students become familiar with the themes and their underlying problems, learn how to think in solutions and analyse interventions. Every problem needs its own approach. In this course, intervention in the system is made specific and practical. 	
Creative Intervention Design	<ul style="list-style-type: none"> The steps of Design thinking for intervention design; Empathize, Define, Ideate, Prototype, Test are introduced and applied Marketing 2.0: basic knowledge of (consumer) buying and behaviour and influential techniques in marketing. Innovation Tools; different tools to bring about innovation in the food system will be demonstrated and discussed 	
Data points	Learning activity or assignment	Learning outcomes
Feedback of expert	<ul style="list-style-type: none"> Development of a well-grounded, modified intervention. 	1A 1B 3B 4B
360 Degree Feedback	<ul style="list-style-type: none"> Professional product: A creative intervention designed by couples of students with different bachelor backgrounds 	1A 1B 3B 4A 4B 4C 5A
Low stake	Learning activity	Learning outcomes
Evaluation moment with tutor about student progress	Preparation of evaluation moment, based on portfolio input and personal action plan	All above mentioned
Final qualification(s)		
<i>The student...</i>		
FQ1. thinks systemically in complex situations in food systems.		
FQ3. distils the challenges in the food system from different perspectives and at different scale levels.		
FQ4. develops and implements solutions that contribute to fundamental food system change towards sustainability.		
FQ5. applies relevant skills to contribute to science based innovation in the food system as a professional and creative change maker.		
Costs: None		

4.5. Module 5

Module 5: Internship			
MINS			
Coordinator:	Marieke Creemers		Total study load (h): 300
Module element	Study load (h)	Name	
MINS01	285	Internship	
MINS02	15	Tutorship	
Entry requirements	None		
Methods	Internship; tutorship meetings		
Professional role	Intrapreneur		
Theme's			
Challenges and solutions	<ul style="list-style-type: none"> Students learn to recognize and analyze relevant food system challenges for a specific organization Students learn to techniques and formats to develop a solution, fitting the challenges Students learn to integrate different perspectives to optimize the chosen solution 		
Different perspectives & the food system	<ul style="list-style-type: none"> Students learn to analyze relevant visions and perspectives Students learn to weigh the importance of different stakeholders and perspectives in the choice for an approach Students learn to involve relevant stakeholders and perspectives into project goals 		
Professional skills	<ul style="list-style-type: none"> Students learn to apply skills gained during the master in a real-life organization Students learn to reflect on professional skills, talents and potential gaps 		
Data points	Learning activity or assignment	Learning outcomes	
Dp. 11: 360 Degree Feedback	A worked out intervention aimed at organizational challenges and opportunities, and the transition of the food system, developed in a real-life situation during a 2-month internship in a company or other organisation	2C 3C 4B 5B	
Dp 13: Personal reflection	Personal transitional leadership development strategy in a self-chosen format.	5B	
Low stake	Learning activity	Learning outcomes	
Evaluation moment with tutor about student progress	Preparation of evaluation moment, based on portfolio input and personal action plan	All above mentioned	
Final qualification(s)			
<i>The student...</i>			
FQ2. approaches complex food system challenges in different contexts and at different scale levels, involving all stakeholders. FQ3. distil the challenges in the food system from different perspectives and at different scale levels. FQ4. develops and implements solutions that contribute to food system change towards sustainability innovation and transition. FQ5. applies relevant skills to contribute to science-based innovation in the food system as a professional and creative change maker.			
Costs: n/a			

4.6. Module 6

Module 6 - Master Proof			
MMPR			
Coordinator:	Elise Gieling		Total study load (h): 360
Module element	Study load (h)	Name	
MMPR01	320	Master proof	
MMPR02	25	Food System Innovator Festival	
MMPR03	15	Tutorship	
Entry requirements	None		
Methods	Self-study, group work, learning circles		
Professional role	Change maker		
Theme's			
Practical research	<ul style="list-style-type: none"> All research skills previously learned can be applied during this module 		
Professional skills	<ul style="list-style-type: none"> All professional skills previously learned can be applied during this module 		
Food System Innovation	<ul style="list-style-type: none"> All food systems innovation knowledge and skills previously learned can be applied during this module 		
Data points	Learning activity	Learning outcomes	
Internal and external expert feedback	Professional product: Masterproof	1C 2C 3C 4C 5A 5B	
Peer- and visitor feedback	Food systems innovator festival organisation	5B	
Low stake	Learning activity		
Evaluation moment with tutor about student progress	Preparation of evaluation moment, based on portfolio input and personal action plan	All above mentioned	
High stake	Learning activity		
Summative evaluation of student: decision on awarding the MSc diploma Food Systems Innovation	Handing in of student portfolio to evaluation committee	All 1-5	
Final qualification(s)			
<i>The student...</i>			
FQ1: thinks systemically in complex situations in food systems			
FQ2: applies relevant skills to contribute to science based innovation in the food system as a professional and creative change maker			
FQ3: distils the challenges in the food system from different perspectives and at different scale levels			
FQ4: develops and implements solutions that contribute to food system change towards sustainability innovation and transition			
FQ5: applies relevant skills to contribute to science based innovation in the food system as a professional and creative change maker			
Costs: n/a			

5 Year schedule MFSI 2022-2023*

This the basic year schedule. This is filled in per year and is variable per week.

Period MFSI	weeknr MFSI	
1	L1	Introduction Camp
1		Introduction Camp
1	L2	Lectures at University
1		Lectures at University
1	L3	Lectures at University
1		Lectures at University
1	L4	Lectures at University
1		Lectures at University
1	L5	Lectures at University
1		Lectures at University
1	L6	Lectures at University
1		Lectures at University
1	holiday	autumn holidays
1		autumn holidays
1	L7	Lectures at University
1		Lectures at University
1	L8	Lectures at University
1		Lectures at University
1		Lectures at University

1		Lectures at University
1		Lectures at University
1	L9	Lectures at University
1		Lectures at University
1	L10	City Study tour
1		City Study tour
1	L11	City Study tour
1		City Study tour
2	L1	Lectures at University
2		Lectures at University
2		
2		Cross-Over Internship
2		Cross-Over Internship
2	L2	Lectures at University
2		Lectures at University
2		
2		Cross-Over Internship
2		Cross-Over Internship
2	L3	Lectures at University
2		Lectures at University
2		
2		Cross-Over Internship
2		Cross-Over Internship
2	L4	Lectures at University
2		Lectures at University
2		
2		
2	holiday	Christmas holiday
2		Christmas holiday
2	holiday	Christmas holiday
2		Christmas holiday
2	L5	Lectures at University

2		Lectures at University
2		
2		Cross-Over Internship
2		Cross-Over Internship
2	L6	Lectures at University
2		Lectures at University
2		
2		Cross-Over Internship
2		Cross-Over Internship
2	L7	Lectures at University
2		Lectures at University
2		
2		Cross-Over Internship
2		Cross-Over Internship
2	L8	Lectures at University
2		Lectures at University
2		
2		Cross-Over Internship
2		Cross-Over Internship
2	L9	Lectures at University
2		Lectures at University
2		
2		Lectures at University
2		Lectures at University
2	L10	Lectures at University
2		Lectures at University
2		
2		Lectures at University
2		Lectures at University
2	L11	Lectures at University
2		Lectures at University
2	holiday	Spring holiday
2		Spring holiday
2	L12	Lectures at University
2		Lectures at University
2	L13	Lectures at University
2		Lectures at University
2		Lectures at University
2		Lectures at University

2		Lectures at University
2		Lectures at University
3	L1	Internship
3		Training at University
3		Internship
3		Internship
3		Internship
3	L2	Internship
3		Internship
3	L3	Internship
3		Internship
3	L4	Internship
3		Training at University
3		Internship
3		Internship
3		Internship
3	L5	Internship
3		Internship
3	L6	Internship
3		Internship
3	holiday	holiday
3		holiday
3	L7	Internship
3		Training at University
3		Internship
3		Internship
3		Internship
3	L8	Masterproof
3		Training at University
3		Masterproof
3		Masterproof
3		Masterproof
3	L9	Masterproof

3		Training at University
3		Masterproof
3		Masterproof
3		Masterproof
3	L10	Masterproof
3		Training at University
3		Masterproof
3		Masterproof
3		Masterproof
3	L11	Masterproof
3		Training at University
3		Masterproof
3		Masterproof
3		Masterproof
3	L12	Masterproof
3		Training at University
3		Masterproof
3		Masterproof
3		Masterproof
3	L13	Masterproof
3		Training at University
3		Masterproof
3		Masterproof
3		Masterproof
3	L14	Masterproof
3		Training at University
3		Masterproof
3		Masterproof
3		Masterproof
3	L15	Masterproof
3		Training at University
3		Masterproof
3		Masterproof
3		Masterproof
3	L16	Food Innovator Festival
3		Food Innovator Festival
3		High stakes moment
3		High stakes moment
3		High stakes moment

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