INTERNATIONAL FOOD & AGRIBUSINESS

COURSE CATALOGUE 2022-2023

's Hertogenbosch, May 2022

Preface

The IFA course catalogue lists all courses offered for the 2022-2023 academic year in the International Food & Agribusiness (IFA) programme at the HAS University of Applied Sciences.
The catalogue gives specific information about the courses provided during the 2022-2023 academic year including course content, credits, learning outcomes, activities and methods, assessment, course coordinator and study materials.
The information presented in the catalogue was composed in May 2022 and is subject to minor changes. The final and leading information is published in the course study manual for each module within the IFA study program.
For more information about the IFA study programme and enrolment, please visit our website www.hasinternational.nl.

Contact details:
HAS University of Applied Sciences
Onderwijsboulevard 221
5223 DE 's-Hertogenbosch, The Netherlands

International Office
mail: international@has.nl

IFA Programme
Mrs Esther van Lieshout,
Study Advisor
E-mail: LvE@has.nl

Table of Contents

Introduction

The IFA program consists of a 4-year programme that is divided into a propaedeutic year and a main phase of 3 years. The main phase is divided into the core phase and the qualified to start phase. Students can obtain a total of 60 credits for each academic year. Table 1 outlines the IFA curriculum as offered in academic year 2022-2023.

Table 1: IFA curriculum academic year 2021-2022

<table>
<tr><th></th><th>Term 1</th><th>Term 2</th><th>Term 3</th><th>Term 4</th></tr>
<tr><td rowspan="3">Year 1</td><td>Global Food Systems IF1421 (6)</td><td>Agri Food Business IF1423 (6)</td><td>Business Economics IF1425 (8)</td><td rowspan="2">Work Experience Placement IF1427 (14)</td></tr>
<tr><td>Intro Food IF1422 (7)</td><td>Primary Production IF1424 (8)</td><td>Biobased Economy IF1426 (6)</td></tr>
<tr><td colspan="4">Personal Leadership IF1420 (5)</td></tr>
<tr><td colspan="5"></td></tr>
<tr><td rowspan="3">Year 2</td><td>Business & Marketing IF2441 (8)</td><td>Sustainable Value Chains IF2443 (8)</td><td>Business Development 1 IF2445 (6)</td><td>Business Development 2 IF2447 (6)</td></tr>
<tr><td>Circular Agri-food Production I IF2442 (6)</td><td>Circular Agri-food Production II IF2444 (6)</td><td>Food Systems Governance IF2446 (8)</td><td>Extension on Sustainability IF2448 (8)</td></tr>
<tr><td colspan="4">Personal Leadership IF2450 (4)</td></tr>
<tr><td colspan="5"></td></tr>
<tr><td>Year 3</td><td colspan="2">Internship (30)</td><td colspan="2">Electives (30), e.g. Internship or Minor</td></tr>
<tr><td colspan="5"></td></tr>
<tr><td rowspan="2">Year 4</td><td colspan="2" rowspan="2">Specialisation (30), e.g. Future Food Systems</td><td colspan="2">Professional Assignment IF4450 (28)</td></tr>
<tr><td colspan="2">Professional Assessment IF4403 (2)</td></tr>
</table>

A description of the various courses in year 1, 2 and 4 is provided in the following chapters. More information on test and examinations can be found in the TER, about the program in the Study manual and specific details about the courses in the course manuals.

Year 1

Course information	Year of study: 2022-2023 Version: 03-2022
Study Programme	International Food and Agribusiness
Course unit code	IF1420
Course unit title	Personal Leadership YEAR 1
Location	Den Bosch
Coordinator	Milouska Lensing-Molenaars (MMi)
Type of course unit	☒ Mandatory ☐ Not mandatory
Language of instruction	English
Credits (ECTS)	5
Moment of delivery	Year 1 Term 1-4
Prerequisites	None
Application deadline	1-5-2022
Content	The main goal of the Personal Leadership course is to teach the student how to instigate his or her personal development based on self-knowledge, personal motivation, learning goals, self-reflection, and feedback. The course offers opportunities to reflect on personality, behavior and attitude. It provides students with tools for change and improvement and offers them guidelines for reaching personal objectives and exploring their talents, values and ambitions. Moreover, the Personal Leadership course teaches students how to critically self-reflect in relation to others, leading to personal leadership within relevant social, international and ethical dimensions. The full IF1420 course runs the full academic year and each term focuses on one or more sub-topics. In *term 1* the first-year students are welcomed at HAS, and are given the opportunity to get better acquainted with fellow-students & IFA staff members in the international classroom. In this scope students participate in an intensive introduction week, including a 3-day excursion to the Dutch Wadden Island Texel. Moreover they meet with their coach to start drawing up their own personal development plan (PDP). In *term 2* the focus lies on getting to know their Talents and learning how to turn these into Strengths. They take the Gallup StrengthsFinder test and learn how to draw up personal and professional learning aims, as well as how to reflect on those. Students also receive their preliminary study advice this term. In *term 3* the Personal Leadership activities help the students to prepare for their Work Experience Placement (WEP) in term 4 and Domain focus for year 2, being either Primary Production or Food. In *term 4* the students use all inputs from the previous terms to reflect on their personal and professional development over the past year (incl. an ethical dilemma) and describe their plans and learning aims for next year.
Learning outcomes	The module contributes to the following program qualifications: 5. Value Based Leadership After successful completion, the student is able to: *Term 1:* – Connect with co-students &staff effectively (teambuilding) – Understand the purpose of personal development (plan) & self-reflection

	Term 2: – Identify personal talents – Formulate learning aims, based on personal talents, as part of personal development plan *Term 3:* – Understand the use of turning personal talents into strengths *Term 4:* – Write a personal reflection report, based on the personal development plan – Describe an ethical dilemma personally encountered (e.g. in WEP context)

Learning activities and teaching methods	Method	Study load (hours)
	Introduction week	40
	Coach consultations (min. 1 per term)	5
	Personal Leadership (homework) assignments	40
	Self-management hours	20
	Lectures & workshops	25
	Ethics (linked to 3 PBL cases)	10
	Total	140

Test matrix

Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination	Resit
Self-reflection report (incl. ethical dilemma and 20 self-management hours)	ASSI	0	PASS	pass/ fail	IND	Wk 1-10	tbd

** The retake options depend on the reason(s) for failing the assignment(s). The lecturer or coach therefore decides upon the exact substitute assignment or re-sit possibility, and does this in consultation with the course coordinator or other coaches

Study materials

Title	Author	Status	Type	Code/comments
Course Manual Personal Leadership YEAR 1	Lensing-Molenaars, M.F.	Required	Digitally available	Updated each year
StrengthsFinder 2.0, Discover Your CliftonStrengths	Rath, T.	Required	Book	ISBN 978-1-59562-015-6

Estimated cost

Cost item	Approximate cost	Comments
Introduction week (3 day-excursion Texel)	Approx. €180	Depending on exact programme & activities
StrengthsFinder 2.0, Discover Your CliftonStrengths	Approx. €25	Including unique access code for online SF test. Please buy a NEW (= NOT second-hand!) version, as you otherwise do not purchase the required access code.

Remarks	-

Course information	Year of study: 2021-2022 Version: def
Study Programme	International Food and Agribusiness

Course information	Year of study: 2021-2022 Version: def
Study Programme	International Food and Agribusiness
Course unit code	IF1421
Course unit title	Global Food Systems
Location	Den Bosch
Coordinator	Neeltje Bekkers (BeN)
Type of course unit	☒ Mandatory ☐ Not mandatory
Language of instruction	English
Credits (ECTS)	6
Moment of delivery	Year 1 Term 1
Prerequisites	None
Application deadline	1-5-2021
Content	In this module Global Food Systems (GFS) diverse elements of the global food system are discussed. Important topics are system thinking principles, the architecture of a food system. Different stakeholders in the system as well as the outcomes of a food system (food security, waste, etc).
Learning outcomes	The module contributes to the following program qualifications: 1. Improving Sustainability of the Global Agri-Food System 4. Creating Change 5. Value Based Leadership 6. Project Management 7. Conducting Applied Research After successful completion, the student is able to: Q1 Student understands the global food system and its outcomes - Understand the architecture, functioning, dynamics and outcomes of the global food system. - Understand the concept of sustainability - Understand the principles of systems thinking Q4 Student identifies different stakeholders and recognizes different opinions and values - Identify relevant stakeholders and their role in the global food system Q5 Student shows awareness of personal talents and competences - Understands the basics of giving & receiving feedback - Understand what an ethical dilemma is and recognize it Q6 Student actively contributes to projects as part of a team - Cooperate with fellow students in a group assignment; provide and ask for information (PBL skills) Q7 Student executes consecutive steps in applied research - Able to search for literature in the (HAS) library, GreenI and online sources; able to select information from explicitly given sources at HBO level; and differentiate between principle and sub-issues - Able to determine main issue for an identified problem in a guided setting

Learning activities and teaching methods	Method	Study load (hours)
	Lectures, related activities, private study	88
	PBL (Problem Based Learning, 5 cases)	80
	Total	168

Test matrix

Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination	Resit
Written Test	WRT	1	5.5[1]	1-10	IND	Wk 9	Term 2
PBL	ASSI	0	pass	Pass/fail	IND	Wk 1-8	Term 2

Study materials				
Title	Author	Status	Type	Code/comments
Reader Global Food Systems	Bekkers, N	Required	Digitally available	Updated each year
Study Manual Global Food Systems	Bekkers, N	Required	Digitally available	Updated each year
PBL Study Manual	Bekkers, N	Required	Digitally available	Updated each year

Estimated cost		
Cost item	Approximate cost	Comments
Vimeo film PBL	€5	
Excursion	€25	
Remarks	-	

[1] Formally 4.0 or higher is a valid grade, but only 5.5 or higher will give credit points

Course information	Year of study: 2022-2023 Version: 03-2022
Study Programme	International Food and Agribusiness
Course unit code	IF1422
Course unit title	Introduction Food
Location	Den Bosch
Coordinator	Sandra van den Berg (BeSa)
Type of course unit	☒ Mandatory ☐ Not mandatory
Language of instruction	English
Credits (ECTS)	7
Moment of delivery	Year 1 Term 1
Prerequisites	None
Application deadline	1-5-2022
Content	This module consists of different elements; Informative lectures and the group project are on the topics 'Food Processing' and 'Nutrition'. Supporting seminars/lectures on 'Chemistry' and 'Reporting' and 'Referencing' are also part of this module 'Food processing' gives the student an introduction in general production and processing aspects of food. Students will learn about the main components of ingredients and their application for food. The topic 'Nutrition' gives students insight into dietary patterns, food products and their consequences on health. They will learn about macronutrients, micronutrients, and water, the recommendations on daily food intake, the purpose of dietary guidelines and how to interpret the nutritional needs of a human being. Some supporting seminars on 'Chemistry' will provide basic knowledge on substances and reactions in food. Throughout the course students work on a group project analyzing ingredients and processes for a food production chain. They will become familiar with the necessary processing techniques in the production chain as well as the nutritional value of the product and how it fits in a healthy diet. Lectures on reporting and referencing are scheduled to help students plan and write the report during this module but also other modules yet to come.
Learning outcomes	The module contributes to the following program qualifications: 2. Contributing to Sustainable Innovation in Agri-Food Production and Consumption; 6. Project management; 7. Doing Research – – After successful completion, the student: Q2 Student understands agro-food production and consumption, their interrelations and sustainability impact - Understands food processing systems, storage and its involved actors - Understands nutrition levels and requirements - Understands properties and conversion of substances in food - Analyses food processing and safety, and nutritional value and health and sustainability impact of food product

	– Q6 Student actively contributes to projects as part of a team - Completes steps in a project in a timely manner - Applies a clear structure (format) in a project report - Applies correct referencing in reporting Q7 Student executes consecutive steps in applied research - Evaluates properties of food, using a hypothesis

Learning activities and teaching methods	Method	Study load (hours)
	Lectures, related activities, private study	146
	Group project	50
	Total	196

Test matrix

Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination	Resit
Written test on Processing and Nutrition	WRT	7	4.0	1-10	IND	Wk 9	Next term
Project 'Commodity to consumer product'	PROJ	3	4.0	1-10	GRP	Wk 10	Next year

Study materials

Title	Author	Status	Type	Code/comments
Course Manual, 2022	Berg, S. van den	Required	Digitally available	Updated each year
Project Management, A practical Approach	R. Grit	Required	Book	ISBN 978-90-01-57562-5
Doing research - the hows and whys of applied research	Nel Verhoeven (4th edition)	Required	Book	ISBN 9789462364820

Estimated cost

Cost item	Approximate cost	Comments
Project Management, A practical Approach	€30	This book is used in all years of the IFA programme
Doing research - the hows and whys of applied research	€55	This book is used in all years of the IFA programme
Group Excursion (by bus)	€50	Shared excursion with IF1421

Remarks	

Course information	Year of study: 2022-2023 Version: 03-2022
Study Programme	International Food and Agribusiness
Course unit code	IF1423
Course unit title	Agri-Food Business (AFBus)
Location	Den Bosch
Coordinator	Mark Copsey (CoM)
Type of course unit	☒ Mandatory ☐ Not mandatory
Language of instruction	English
Credits (ECTS)	6
Moment of delivery	Year 1 Term 2
Prerequisites	None
Application deadline	1-5-2022
Content	This course teaches students about: - The different functions, activities and operational systems involved in running an agri-food business - Use of strategy, marketing and innovation to differentiate a business - The functioning of agri-food supply chains - Key principals and concepts of marketing and sales
Learning outcomes	The module contributes to the following program qualifications: 3. Contributing to New Business Models 4. Creating change 6. Project Management 7. Research After successful completion, the student is able to: Q3 Student understands how international food- & agribusinesses operate - Recognise and understand consecutive steps of running a business - Understand the basic elements of supply chain management including logistics - Recognise and understand some fundamentals of marketing Q4 Student identifies different stakeholders and recognises different opinions and values - Remember and understand the basics of communication & giving advice (building trust) - Indicate differences between cultures and describe how this affects communication in and between cultures in an international agri-food business - Give a professional presentation in English Q6 Student actively contributes to projects as part of a team - Plan project activities in a project team action plan; Write a well-structured project report Q7 Student executes consecutive steps in applied research - Perform some basic calculations on a given data set in Excel

Learning activities and teaching methods	Method	Study load (hours)
	Theory is provided in weekly instruction lectures	28
	Excursion	4
	For the group projects, tutor meetings	12
	Unsupervised group work on assignments	58
	Self-study	66
	Total	168

Test matrix							
Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
Written test on Agri-food business	WRT	1	4.0	1-10	IND	Wk 9 (2 hrs)	Next term
Project	PROJ	1	4.0	1-10	GRP	Wk 10	Next year

Study materials				
Title	Author	Status	Type	Code/comments
Course Manual	M. Copsey	Required	Digitally available	Make a print
Lecture hand-outs, additional literature and articles	Various	Required	Digitally available	
The Essentials of Operations Management	N. Slack	Required	Digitally available	
Marketing and the Customer Value Chain	T. Fotiadis e.a.	Required	Book	ISBN 9781138394490
Cultures and Organisations – software of the mind	G. Hofstede, G.J. Hofstede, M. Minkov	Required	Book	ISBN 9780071664189
Business for Punks	J. Watt	Recommended		ISBN 9780241202890

Estimated cost		
Cost item	Approximate cost	Comments
Required literature/books	€90.- for required books	Useful as reference material for the entire IFA programme
Group Excursion (by bus)	€25.-	
Other travel	N/A	Group work, by own transportation
Remarks	-	

Course information	Year of study: 2022-2023 Version: 03-2022
Study Programme	International Food and Agribusiness
Course unit code	IF1424
Course unit title	Primary Production Systems
Location	Den Bosch
Coordinator	Gracia Ribas (RiG)
Type of course unit	☒ Mandatory ☐ Not mandatory
Language of instruction	English
Credits (ECTS)	8
Moment of delivery	Year 1 Term 1
Prerequisites	None
Application deadline	1-5-2022
Content	Primary production is broad and diverse. The module focussing on crop and animal production from four perspectives; ✓ Soil, Fertilization and Feed ✓ Management (e.g. labour, technology and housing) ✓ Breeding and Genetics ✓ Health and Diseases We look at the impact of crop- and animal production on global climate change, food waste and loss of biodiversity. We will compare intensified with agro-ecological farming as production systems, to obtain diverse views on how to cope the challenges in production.
Achieved Learning Outcomes prior to this module	To participate successfully, students should be able to: Q4 Creating Change - Identify relevant stakeholders and their role in the global food system Q5 Value based Leadership - Understands the basics of giving & receiving feedback - Understand what an ethical dilemma is and recognize it Q6 Project Management - Cooperate with fellow students in a group assignment; provide and ask for information Q7 Conducting Applied Research - Able to search for literature in the (HAS) library, GreenI and online sources; able to select information from explicitly given sources at HBO level - Able to determine main issue for an identified problem in a guided setting
Learning outcomes	This module contributes to the following IFA qualifications: – 2. Contributing to sustainable innovation in Agri-food production – 4. Creating Change – 5. Value Based Leadership – 6. Project Management – 7. Conducting Applied Research After successful completion, the student is able to: Q2 Student understands agro-food production and consumption, their interrelations and sustainability impact - Understanding of differences in primary production systems (crop and animal) and its impacts on production levels

	- Understanding of differences in required inputs and outputs, and its impacts - Understanding of relation primary production and sustainability issues During Problem Based Learning sessions learning objectives related to the skills that are practised (Qualification 5, 6 and 7). Q5 Student shows awareness of personal talents and competences - Give and receive feedback, by applying the basic feedback rules - Identify an ethical dilemma and make a simple analysis Q6 Student actively contributes to projects as part of a team - Cooperate with fellow students in a group assignment; provide and ask for information (PBL skills) - Present results in a convincing (structure, form) manner Q7 Student executes consecutive steps in applied research – Able to find the original sources via GreenI, online and in the (HAS) library; able to select information from implicitly given sources at HBO level, relevant to the problem; and differentiate between principle and sub-issues

Learning activities and teaching methods	Method	Study load (hours)
	Total contact hours	60
	Self-Study PBL (24 hours/case)	96
	Self-study dialogues (8h/case)	24
	Self-study	68
	Total	224

Test matrix

Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
Written test	WRT	1	5.5[2]	1-10	IND	Wk 9 (2 hrs)	Next term
PBL	ASSI	0	pass	Pass/ fail	IND	Wk 8	Next year

Study materials

Title	Author	Status	Type	Code/comments
Study manual Primary Production Systems	Van de Steeg, J	Required	Digitally available	Updated each year
Lecture hand-outs, additional literature and articles	Various	Required	Digitally available	

Estimated cost

Cost item	Approximate cost	Comments
Group Excursion (by bus)	€20	
Literature	€25	Available as book or e-book.
Remarks	-	

[2] Formally 4.0 or higher is a valid grade, but only 5.5 or higher will give credit points

Course information	Year of study: 2022-2023 Version: 03-2022
Study Programme	International Food and Agribusiness
Course unit code	IF1425
Course unit title	Business Economics
Location	Den Bosch
Coordinator	Mieke Rovers-Lenssen (RoMi)
Type of course unit	☒ Mandatory ☐ Not mandatory
Language of instruction	English
Credits (ECTS)	8
Moment of delivery	Year 1 Term 3
Prerequisites	None
Application deadline	01-05-2022
Content	This course covers: The practical introduction to business economics. Students learn: - The key principles, concepts and systems of finance, financial accounting and management accounting respectively; - Understand which factors determine management, organisation, inventory and warehousing decisions; - How to interpret and execute basic financial calculations, analysis, and prepare financial documents; - Proper usage of KPIs developing intermediate Excel/Mathematics skills; The course is a practical guide to essential skills of understanding/using financial information for decision-making, e.g. determine the overall financial position, judge the impact on the financial sustainability of an organisation.
Learning outcomes	The module contributes to the following IFA programme qualifications: 3. Contributing to international business development 6. Project management 7. Conducting applied research After successful completion, the student is able to: Q3: Student understands how international food- & agribusinesses operate - Explain financial management principles in given examples; - Carry out financial structure assessment of international agri-food businesses; - Use cost structure and apply costing principles; - Explain used financials in annual reports and draw conclusions; - Explain how True Cost Accounting as tool can be effective to address the pervasive imbalance in our agri-food system; - Determine the financial and sustainability implications of inventory and warehousing decisions; - Recognise and understand different organisation structures, management, and leadership styles of companies (SMEs); - Recognise and understand the internal/external factors that determine internal organisation/management. Q6: Student actively contributes to projects as part of a team - Plan, execute, monitor and evaluate a project including resources within a self-steering project team. Q7: Student executes consecutive steps in applied research - Perform calculations (percentage, equations, exponential functions) on a given assignment and/or data set in Excel; - Select, analyse, and combine information to formulate main/sub-questions; - Within the international project identify and structure key findings; visualise these in a presentable format addressing the target audience.

Learning activities and teaching methods	Method	Study load (hours)
	Thematic & instruction lectures	30
	Tutorials (compulsory)	8
	Question & Answer sessions	7
	International project – group tutorials (compulsory)	8
	Guest lectures + excursion by field experts (compulsory)	11
	Excel/mathematics incl. self-study	26
	Self-study hours + project work	134
	Total	224

Test matrix

Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
Written test	WRT	7	5.5	1-10	IND	Wk 9 (2 hrs)	Next term
Project Business (review, report + infographic)	PROJ	3	4.0	1-10	GRP	Wk 1-10	TBD

Study materials

Title	Author	Status	Type	Code/comments
Course manual	M. Rovers-Lenssen	Required	Digitally available	Updated each year
Reader	M. Rovers-Lenssen	Required	Digitally available	Updated each year
The Basics of Financial Management; 5th edition	W. Koetzier, R. Brouwers	Required	Book	9789001738334
Mathematics for Business Economics	H. Hamers, J. Kleppe, B. Kaper	Recommended	Book	9789024428427
Project Management, A practical Approach	R. Gritt	Required	Book	Already in possession

Estimated cost

Cost item	Approximate cost in €	Comments
Required literature/books	€90.- for required book €90.- for additional books (if not in possession yet)	Useful as reference material for the entire IFA programme
Travel costs excursion	€25.-	Aimed to be combined with IF1426 Biobased Economy.

Remarks	-

Course information	Year of study: 2022-2023 Version: 03-2022
Study Programme	International Food and Agribusiness
Course unit code	IF1426
Course unit title	Biobased Economy
Location	Den Bosch
Coordinator	Frank de Bont (BoF)
Type of course unit	☒ Mandatory ☐ Not mandatory
Language of instruction	English
Credits (ECTS)	6
Moment of delivery	Year 1 Term 3
Prerequisites	None
Application deadline	1-5-2022
Content	Nowadays, most of our fuels and materials are still produced from fossil resources. Fossil resources are, however, finite and their use results in emissions that affect the environment and human health. Therefore, there is a tendency to change towards a Biobased Economy (BBE). In a BBE, biomass and biomolecules are the building blocks for (non-)food products, such as colorants, fuels, and construction materials. However, biobased products are only sustainable when the biomass/biomolecules are produced sustainably. This course focusses on renewable production of biomass, considering the cycling of essential elements that are needed to grow biomass. Biomass is complex and can be used to produce multiple products. The student will learn to apply the value vs. volume theory including ethical dilemmas to indicate business opportunities in the BBE. Finally, the student will investigate the impact of production on climate change, even in the BBE, by calculating a carbon footprint.
Achieved Learning Outcomes prior to this module	To participate successfully, students should be able to: Q2 (Contributing to Sustainable Innovation in Agri-Food Production and Consumption): - Understand food processing systems - Understand properties and conversion of substances in food - Understand the differences in primary production systems (crop and animal) and the impacts of such differences on production levels - Understand the differences in required inputs and outputs, and their impacts - Understand the relation between primary production and sustainability issues Q5 (Value based Leadership): - Formulate a learning aim based on feedback received, and ask for related feedback & feedforward Q6 (Project Management): - Cooperate with fellow students in a group assignment; provide and ask for information - Present results in a convincing (structure, form) manner Q7 (Conducting Applied Research) - Perform some basic calculations (mean, standard deviation) on a given data set in Excel - Find original sources via GreenI, online and in the (HAS) library - Select information from pre-assigned sources at HBO level, relevant to the problem - Value external information and form an opinion

	- Able to determine the main question and sub-questions, in their own words, with the help of fellow students or their tutor
Learning outcomes	The module contributes to the following program qualifications: 2. Contributing to Sustainable Innovation in Agri-Food Production and Consumption 5. Value Based Leadership 6. Project management 7. Conducting Applied Research After successful completion, the student is able to: Q2: Student understands agro-food production and consumption, their interrelations and sustainability impact - Explain the relevance of a Biobased Economy - Explain the main (biobased) processes occurring on planet earth - Explain the Biobased Economy at present and in the near future, and provide an overview of biomass, conversion technologies and bio-energy/biomaterials - Quantify the food versus fuel dilemma and suggest possible solutions - Quantify the flows (input and impact) of carbon based on the processes of a farm (footprinting). During Problem Based Learning sessions learning objectives related to the skills that are practised (Qualification 5, 6 and 7) are: Q5 Student shows awareness of personal talents and competences - Provide and receive feedback, by applying the basic feedback rules, being aware of a multicultural setting - Exchange ideas about an ethical dilemma Q6 Student actively contributes to projects as part of a team: - Present results in a convincing manner (in terms of both structure and form). Q7 Student executes consecutive steps in applied research - Formulate a main question and useful sub-questions in their own words, based on a given case - Select, analyze and combine information from pre-assigned sources with additional information they have sourced themselves - Select sources (secondary data) that are relevant and reliable - Assess external information leading to the formation of an opinion

Learning activities and teaching methods	Method	Study load (hours)
	PBL (Problem Based Learning, 4 cases)	60
	Lectures and private study	90
	Excursion	8
	Practical (biodiesel), incl. preparation	8
	Exam	2
	Total	168

Test matrix

Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
Written test	WRT	1	5.5[3]	1-10	IND	Wk 9	Next term

[3] Formally 4.0 or higher is a valid grade, but only 5.5 or higher will give credit points

						(2 hrs)	
PBL + attendance	ASSI	0	pass	pass/ fail	IND	Wk 1-8	Next year

Study materials				
Title	Author	Status	Type	Code/comments
Course Manual	Bont, F. de	Required	Digitally available	Updated each year
Various articles	-	Required	Digitally available	Updated each year
Practical guide Biodiesel	Van der Hout & van Eerten	Required	Digitally available	Updated each year

Estimated cost		
Cost item	Approximate cost in €	Comments
Required literature/books	none	
Travel costs excursion	€ 25	Combined with IF1425 Business Economics
Remarks	-	

Course information	Year of study: 2022-2023 Version: def
Study Programme	International Food and Agribusiness
Course unit code	IF1427
Course unit title	Work Experience Placement (WEP)
Location	Den Bosch
Coordinator	Gracia Ribas (RiG)
Type of course unit	☒ Mandatory ☐ Not mandatory
Language of instruction	English
Credits (ECTS)	14 ECTS
Moment of delivery	Year 1 Term 4
Prerequisites	None
Application deadline	1-5-2022
Content	During this module, the student will gain practical work experience in an organization in the agri-food sector. The WEP takes place with a duration of 9 weeks. Four days a week the student works in the daily operations of the host organization. One day per week the students works on HAS WEP assignments either from home, or on the premises of the organization. The WEP can take place either in the Netherlands or abroad.
Achieved Learning Outcomes prior to this module	To participate successfully, students should be able to: Q1 Improving Sustainability of the Global Agri-Food System - Understand the architecture, functioning, dynamics and outcomes of the global food system - Understand the concept of sustainability - Understand the principles of systems thinking Q2 Contributing to Sustainable Innovation in Agri-Food Production and Consumption - Student understands agro-food production and consumption, their interrelations and sustainability impact Q3 Contributing to New Business Models - Recognize and understand consecutive steps in the manufacturing of agri-food products - Understand the basic elements of logistics - Recognize and understand some fundamentals of marketing - Explain financial management principles in given examples. - Carry out financial structure assessment of international agri-food businesses. - Use the cost structure and apply costing principles. - Explain used financials in annual reports and draw conclusions. - Recognize and understand different organization structures, management, and leadership styles of companies (SMEs) - Recognize and understand the internal/external factors that determine internal organization/management - Recognize and understand logistical steps and principles in international agri-food supply chains Q4 Creating change - Identify relevant stakeholders and their role in the system of the WEP organization - Remember and understand the basics of communication & giving advice (building trust) Q5 Value Based Leadership - Identify an ethical dilemma and make a simple analysis, and exchange ideas about it.

	- Formulate learning aims, based on personal talents, as part of personal development plan - Understand the use of turning personal talents into strengths Q6 Project Management - Present results in a convincing (structure, form) manner - Plan and monitor project activities in a project team action plan; Prepare and monitor a project budget
Learning outcomes	The WEP contributes to the following program qualifications: - Map the system of the organization in a visual way (Q1) - Explain the architecture, functioning, dynamics and outcomes of the organizations' system (Q1) - Describe what is your role in the organization and the applicable daily activities (Q2) - Describe the different departments and/or processes of the organization in a clear and visual way (Q2) - Explain how the activities/processed are interrelated and what their impact is on sustainability (Q2) - Apply 3 of the learning outcomes of qualification 3 level 1 (contributing to new business models) to the host organization (Q3). - Identify relevant stakeholders and their role in the system of the WEP organization (Q4) - Apply basic communication skills in a professional setting (Q4) - Reflect on your personal and professional growth according the STARR method (Q5) - Reflect on the IFA qualifications that you applied during the WEP (Q5) - Write a well-structured project report (Q6) - Set up a simple research report for an simple problem in a guided setting (Q7)

Learning activities and teaching methods	Method	Study load (hours)
	Preparation & info sessions	5
	4 days per week: execution of WEP in organisation (9*32h/week)	288
	1 day per week preparing assignments (at home or at the organisation) (9*8h/week)	72
	Report / Vlog	27
	Total	392

Test matrix

Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
WEP vlog (40%), report (40%) & performance (20%)	ASSI	1	5.5[4]	1-10	IND	Weeks 6 & 9	Term 1, 2023-2024
Assessment host organization	ASSI	0	-	1-10 formative	IND	Week 9	N.A

Study materials

Title	Author	Status	Type	Code/comments

[4] Formally 4.0 or higher is a valid grade, but only 5.5 or higher will give credit points

Course Manual IF1427	Ribas, G.	Required	Digitally available	Updated each year
Estimated cost				
Cost item	Approximate cost in €		Comments	
Travels	By own/public transportation		Costs depending on where WEP takes place	
Remarks				

Year 2

Course information	Year of study: 2022-2023 Version: 05-2022
Study Programme	International Food and Agribusiness
Course unit code	IF2441
Course unit title	Business & Marketing
Location	Den Bosch
Coordinator	Mieke Rovers-Lenssen
Type of course unit	☒ Mandatory ☐ Not mandatory
Language of instruction	English
Credits (ECTS)	8
Moment of delivery	Year 2 Term 1
Prerequisites	None
Application deadline	1-5-2022
Content	The Business & Marketing course trains you for strategic business management and marketing concepts and principles in the international agri-food market, as well as conducting applied research in your chosen domain. With a small student team, for a given organisation, you will identify the value proposition, conduct a situational analysis, define strategic options and deliver an overall implementation and customer value creation plan. In essence, the course is structured around business challenges and opportunities. - Introduction to applied strategic marketing and the planning process; - Use data in assessing the business environment (incl. risk mitigation/financial drivers/structure and culture); - Insight in customer behaviour (B2B/B2C); - Apply research methodology (incl. LRFM/statistics) in a given assignment; - Define a central problem based on SWOT analysis and identify options; - Define segmentation, targeting and positioning (STP); - Construct an overall 1-year execution plan.
Achieved Learning Outcomes prior to this module	To participate successfully, students should be able to: Q3: Contributing to New Business Models - Understand consecutive steps in manufacturing agri-food products; - Understand the basic elements of logistics, inventory and warehousing; - Understand fundamentals of marketing; - Explain financial management principles in given examples; - Carry out financial structure assessment of international agri-food businesses; - Use cost structure and apply costing principles; - Explain used financials in annual reports and draw conclusions; - Explain how True Cost Accounting as tool can be effective to address the pervasive imbalance in our agri-food system; - Recognise and understand different organisation structures, management, and leadership styles of companies (SMEs); - Recognise and understand the internal/external factors that determine internal organisation/management.

<table>
<tr><td></td><td>Q4. Creating Change
- Student can apply basic advisory skills, throughout a brief and controlled advisory process commissioned.
Q6. Project management
- Write a structured and complete project proposal;
- Present results in a convincing (structure, form) manner;
- Compose a project plan (including planning/ budgeting/ risk assessment).
Q7 (Conducting Applied Research)
- Formulate conclusions and recommendations</td></tr>
<tr><td>Learning outcomes</td><td>The module contributes to the following program qualifications:
3. Contributing to New Business Models
4. Creating Change
5. Value-based leadership
6. Project management
7. Conducting Applied Research

After successful completion, the student is able to:
Q3:
- Execute the consecutive steps of the marketing planning process;
- Analyse the business environment and determine marketing strategies;
- Estimate the financial drivers as part of developing marketing strategies;
- Illustrate business models and key management/organisation aspects of SMEs/family businesses;
- Determine a 1-year implementation and customer value creation plan.
Q4:
- Formulate and pitch advice for a SME on a marketing assignment.
- Apply basic advisory skills, throughout a marketing planning process commissioned by an external client.
Q5:
- Give and receive feedback in projects, in order to reflect on personal development;
Q6:
- Write a structured and complete (1-year) implementation plan for an external client (including planning/budgeting/risk assessment)
Q7:
- Apply various research methodologies, including interview techniques, for collection of primary/secondary data of acceptable quality;
- Collect data in a correct and organised manner;
- Analyse collected data for discussion and formulating conclusions and advice;
- Choose proper methods to answer the research question and justify the use of the methods (i.e. LRFM/statistics);
- Discuss results and methods.</td></tr>
<tr><td>Learning activities and teaching methods</td><td><table><tr><th>Method</th><th>Study load (hours)</th></tr><tr><td>Thematic (guest/instruction) lectures</td><td>40</td></tr><tr><td>Group Project including tutoring/company visits</td><td>80</td></tr></table></td></tr>
</table>

	Private study and written test	104
	Total	224

Test matrix							
Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
Written test	WRT	1	4.0	1-10	IND	Wk 9 (2hrs)	Next term
Project	ASSI	1	4.0	1-10	GRP	Wk 10	Next term

Study materials				
Title	Author	Status	Type	Code/comments
Course manual	M. Rovers-Lenssen	Required	Digitally available	Updated each year
Lecture hand-outs, additional literature, articles	Various	Required	Digitally available	Updated each year
Marketing Fundamentals - An International Perspective (2nd edition, 2013)	B.J. Verhage	Recommended	Book	Already in possession
Applied Strategic Marketing	K. Alsem	Required	Book	ISBN 9781138332089
The Basics of Financial Management; 5th edition	W. Koetzier, R. Brouwers	Required	Book	Already in possession
Doing research - the hows and whys of applied research (4th edition)	N. Verhoeven	Required	Book	Already in possession
Project Management, A practical Approach	R. Grit	Required	Book	Already in possession

Estimated cost		
Cost item	Approximate cost	Comments
Literature/books	€45.- for required book App. €150.- for additional books (if not in possession yet)	Useful as reference material for the entire IFA programme
Group excursion (by bus)	About €25.-	Aimed to be combined with IF2442 Circular Agri-Food Production.
Other travel	About €25.-	Cost for own transportation is depending on where client is located.
Remarks	-	

Course information	Year of study: 2022-2023 Version: 03-2022
Study Programme	International Food and Agribusiness
Course unit code	IF2442
Course unit title	Circular Agri-Food Production 1
Location	Den Bosch
Coordinator	Frank de Bont (BoF)
Type of course unit	☒ Mandatory ☐ Not mandatory
Language of instruction	English
Credits (ECTS)	6 EC
Moment of delivery	Year 2, Term 1 **(but: This course can only be taken in combination with Circular Agri-Food Production 2 (IF2444))**
Prerequisites	See *Achieved Learning Outcomes prior to the start*
Application deadline	1-5-2022
Content	The current food system is unsustainable: resources are depleted, waste streams are not reused and diets are not healthy. Meanwhile, agricultural production is an increasing resource for materials and chemicals in a biobased economy. In this course students will learn current opportunities to optimize the production and consumption in the food system, that will help to develop towards a circular economy. Students will learn to calculate balances on different elements, and the technologies that can promote circular production. Also, students will execute a research project in the field of agri-food production They will do their own experiments, using the lab facilities of HAS . The results will be presented in a report and at an event (in term 2).
Achieved Learning Outcomes prior to start	Q2 (Contributing to Sustainable Innovation in Agri-Food Production and Consumption): - Explain the relevance of a Biobased Economy - Explain the main (biobased) processes occurring on planet earth - Explain the Biobased Economy in present and near future and give an overview of biomass, conversion technologies and bio-energy/biomaterials - Quantify the food versus fuel dilemma and come up with possible solutions - Quantify the flows (input and impact) of carbon based on the processes of a farm (foot printing). Q7 (Conducting Applied Research): - Perform some basic calculations (mean, standard deviation) on a given data set in Excel with given data - Formulate a main question and useful sub-questions in their own words, based on a given case - Select, analyze and combine information from implicitly given sources with extra information they have found themselves

	- Select sources (secondary data) that are relevant and reliable - Judge external information leading to the formation of an opinion
Learning outcomes	The module contributes to the following IFA-program qualifications: 2. Contributing to Sustainable Innovation in Agri-Food Production and Consumption 7. Conducting Applied Research After successful completion, the student is able to: Q2: Student analyses (international) developments and opportunities towards sustainable agrofood production and consumption - Student can evaluate options to valorize waste streams of food production systems - Student can compute the amount of streams and resources in food the production system Q7: Student executes applied research and contributes to its design - Describe relevant research methodologies (experiments) - Write a theoretical background using up to date and trustworthy information sources - Formulate and test a hypothesis - Choose proper methods to answer the research question and justify the use of the methods.

Learning activities and teaching methods	Method	Study load (hours)
	Lectures and inspiration sessions	36
	Company visits	8
	Practicals (in lab or in field or at home)	2
	Tutor meetings	4
	Project work	52
	Self study	64
	Exams	2
	Total	168

Test matrix IF2442 – Circular Agri-Food Production 1

Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
Written test Circular Agri-Food Production	WRT	1	[5]	1-10	IND	Wk 9	Next term
Project Circular Agri-Food Production 1	ASSI	0	-	Formative	GRP	Wk 1-10	Next term**

** The retake options depend on the reason(s) for failing the assignment(s). The lecturer or coach therefore decides upon the exact substitute assignment or re-sit possibility, and does this in consultation with the module coordinator or other coaches

[5] Formally 4.0 or higher is a valid grade, but only 5.5 or higher will give credit points

Study materials				
Title	Author	Status	Type	Code/comments
Study manual Circular Agri-Food Production	Bont, F. de	Required	Digitally available	Updated each year
Doing Research - the Hows and Whys of Applied Research	Nel Verhoeven (4th edition)	Required	Book	Already in possession

Estimated cost		
Cost item	Approximate cost	Comments
Travel costs excursions	€50	1 company visit, aimed to be combined with IF2441 Business and Marketing.
Literature	(€50)	If not in possession yet

Course information	Year of study: 2022-2023 Version: 04-2022
Study Programme	International Food and Agribusiness
Course unit code	IF2443
Course unit title	Sustainable Value Chains
Location	Den Bosch
Coordinator	Marnix Wolters (WoMa)
Type of course unit	☒ Mandatory ☐ Not mandatory
Language of instruction	English
Credits (ECTS)	8
Moment of delivery	Year 2 Term 2
Prerequisites	None
Application deadline	1-5-2022
Content	Within the Sustainable Value Chains module, the following topics are covered: • Market transformation & sustainability initiatives; • Voluntary sustainability standards (certification); • Supply chain management, logistics and distribution; • Quality management in global supply chains; • Global food trade via global food chains and commodity markets; • Price volatility and business mitigation strategies; • Responsible & inclusive business.
Achieved Learning Outcomes prior to this module	- Q1 Student understands the global food system and its outcomes - Understand the architecture, functioning, dynamics and outcomes of the global food system. - Understand the concept of sustainability - Understand the principles of systems thinking - Q3 Student understands agro-food production and consumption, their interrelations and sustainability impact - Recognize and understand consecutive steps in the manufacturing of agri-food products - Identify consecutive processes throughout the supply chain of a food product - Recognize and understand logistical steps and principles in international agri-food supply chains Q4 Student identifies different stakeholders and recognizes different opinions and values - Identify relevant stakeholders and their role in the global food system - Remember and understand the basics of communication & giving advice (building trust) - Give a professional presentation in English - Indicate differences between cultures and describe how this affects communication in and between cultures in an international agri-food business - Identify relevant stakeholders and their role in the global food system - Apply basic communication skills in a professional setting - Q5 Student shows awareness of personal talents and competences

	- Understands the basics of giving & receiving feedback - Understand what an ethical dilemma is and recognize it - Q6 Student actively contributes to projects as part of a team - Plan project activities in a project team - Complete steps in a project in a timely manner - Apply a clear structure (format) in a project report - Present project results in a convincing (structure, form) manner - Apply correct referencing in reporting - Write a well-structured project report
Learning outcomes	The module contributes to the following program qualifications: 1. Improving Sustainability of the Global Agri-Food System 3. Contributing to New Business Models 5. Value-based leadership 6. Project management After successful completion, the student is able to: Q1 Student is able to analyse the governance and sustainability of food systems and examine different system interventions - Understand global food trade via chains and markets and interpret interventions towards sustainable market transformation - Analyse sustainability challenges in the global food system and argue possible business interventions Q3 Student identifies opportunities in agri-food markets and international supply chains and with that contributes to business development - Interpret the functioning and effect of contractual agreements, trade agreements and other policy instruments on international trade relations and different stakeholders - Analyse the effect of fluctuations in currencies, commodities and the interdepency of these flows and identify tools for risk mitigation - Execute a Plan-Do-Check-Act (pdca) cycle for quality management systems - Compare and judge decisions in the set-up and management of value chains, both up- and downstream, for sustainability and operational issues. Give recommendations for improvements that make sense in a business environment - Execute a Plan-Do-Check-Act (pdca) cycle for quality management systems - Compare and judge decisions in the set-up and management of value chains, both up- and downstream, for sustainability and operational issues. Give recommendations for improvements that make sense in a business environment - Understands the concepts of Lean and Agile production and the implications thereof on agrifood supply chains - Analyse the financial implications of sustainability interventions in existing supply chains Q4: Student advices a single company on sustainable improvement in the global agri-food sector

	- apply basic advisory skills, throughout a brief and controlled advisory process commissioned by an external client Q5: Student evaluates personal talents and competences, and reflects on ethical issues, leading to personal leadership - Give and receive feedback in projects, in order to reflect on personal development Q6: Student organizes and executes a project and collaborates in teams and with the client - Compose a project plan for a real-life assignment (including planning/budgeting/risk assessment) - Execute a real life project in international context according to a set-up project plan and with guidance

Method	Study load (hours)
Lectures	32
Guest lectures	6
Tutorials (group project)	7
Excursion to PoR	8
Self-study and project work	191
Total	224

Test matrix

Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
Written test	WRT	3	4.0	0-10	IND	Wk 9	Next term
Project	PROJ	2	4.0	0-10	GRP	Wk 8	Next year/tbd*

* The retake options depend on the reason(s) for failing the assignment(s). The tutor therefore decides upon the exact substitute assignment or re-sit possibility, and does this in consultation with the module coordinator or other coaches

Study materials

Title	Author	Status	Type	Code/comments
Course Manual	Wolters, M	Required	Digitally available	Updated each year
Changing the Game	Simons, L and Nijhof, A.	Required	Book	New (published 2020)
IFA Value Chain Reader	Wolters, M	Required	Digitally available	Already in possession
Project Management, A practical Approach	Grit, R.	Required	Book	Already in possession

Estimated cost

Cost item	Approximate cost in €	Comments

Literature/books	Approx. 80 EUR	If not in possession yet
Excursion	Approx. 25 EUR	Port of Rotterdam visit
Company visits	Approx. 25 EUR	Depending on location
Remarks		

Course information	Year of study: 2022-2023 Version: 03-2022
Study Programme	International Food and Agribusiness
Course unit code	IF2444
Course unit title	Circular Agri-Food Production 2
Location	Den Bosch
Coordinator	Frank de Bont (BoF)
Type of course unit	☒ Mandatory ☐ Not mandatory
Language of instruction	English
Credits (ECTS)	IF2444
Moment of delivery	Year 2, Term 2 **(but: This course can only be taken in combination with Circular Agri-Food Production 1 (IF2442))**
Prerequisites	See *Achieved Learning Outcomes prior to the start*
Application deadline	1-5-2022
Content	The current food system is unsustainable: resources are depleted, waste streams are not reused and diets are not healthy. Meanwhile, agricultural production is an increasing resource for materials and chemicals in a biobased economy. In this course students will learn current opportunities to optimize the production and consumption in the food system, that will help to develop towards a circular economy. They will focus on one domain: either Primaray Production or Food Production and Consumption. In either domain students will learn about current technological developments and possible solutions to promote a sustainable system. Also, students will execute a research project in the field of agri-food production They will do their own experiments, using the lab facilities of HAS . The results will be presented in a report and at an event (in term 2).
Achieved Learning Outcomes prior to start	Q2 (Contributing to Sustainable Innovation in Agri-Food Production and Consumption): - Explain the relevance of a Biobased Economy - Explain the main (biobased) processes occurring on planet earth - Explain the Biobased Economy in present and near future and give an overview of biomass, conversion technologies and bio-energy/biomaterials - Quantify the food versus fuel dilemma and come up with possible solutions - Quantify the flows (input and impact) of carbon based on the processes of a farm (foot printing). Q7 (Conducting Applied Research): - Perform some basic calculations (mean, standard deviation) on a given data set in Excel with given data - Formulate a main question and useful sub-questions in their own words, based on a given case

	- Select, analyze and combine information from implicitly given sources with extra information they have found themselves - Select sources (secondary data) that are relevant and reliable - Judge external information leading to the formation of an opinion And specific for the choice for Food or Primary Production: Q2 Food: - Understand food processing systems - Understanding nutrition levels and requirements - Understand properties and conversion of substances in food Q2 Primary production systems: - Understand the differences in primary production systems (crop and animal) and its impacts on production levels - Understand the differences in required inputs and outputs, and its impacts - Understand the relation between primary production and sustainability issues
Learning outcomes	The module contributes to the following IFA-program qualifications: 2. Contributing to Sustainable Innovation in Agri-Food Production and Consumption 7. Conducting Applied Research After successful completion, the student is able to: Q2: Student analyses (international) developments and opportunities towards sustainable agrofood production and consumption Domain Food - Student can illustrate the impact of valorizing options on resources, environment and health - A student can assess interventions to promote sustainable diets and food security - A student can examine Innovations in technological developments in food processing and health and sketch possible impact for the future Domain Primary Production: - Student can illustrate the impact of valorizing options on resources, environment and health - A student can suggest innovations to promote agro-ecolocial or sustainable intensifcation practices - A student can examine current and future innovations in primary production systems and sketch possible impact on the future Q7: Student executes applied research and contributes to its design - Collect data in a correct and organised manner - Discuss results and methods - Perform some basic statistic calculations (e.g. mean, standard deviation, frequencies, crosstabs, Chi-square, analysis of variance) on a collected data set, making use of statistical software (R) - Formulate conclusions and recommendations.

Learning activities and teaching methods	**Method**	**Study load (hours)**
	Lectures and inspiration sessions	36
	Company visits	8
	Practicals (in lab, in field or at home)	2
	Tutor meetings	4
	Project work	46
	Event	6
	Self study	65
	Exams	1
	Total	**168**

Test matrix IF2444 – Circular Agri-Food Production 2

Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
Oral test Circular Agri-Food Production	ORAL	2	4.0	1-10	IND	Wk 9	Next term
Project Circular Agri-Food Production 2	ASSI	1	4.0	1-10	GRP	Wk 1-10	Next term**

** The retake options depend on the reason(s) for failing the assignment(s). The lecturer or coach therefore decides upon the exact substitute assignment or re-sit possibility, and does this in consultation with the module coordinator or other coaches

Study materials

Title	Author	Status	Type	Code/comments
Course manual Circular Agri-Food Production	Bont, F. de	Required	Digitally available	Updated each year
Doing Research - the Hows and Whys of Applied Research	Nel Verhoeven (4th edition)	Required	Book	Already in possession

Estimated cost

Cost item	Approximate cost	Comments
Travel costs excursions	€50	1 company visit, aimed to be combined with IF2443 Sustainable Value Chains
Literature	(€50)	If not in possession yet

Course information	Year of study: 2022-2023 Version: 03-2022
Study Programme	International Food and Agribusiness
Course unit code	IF2445
Course unit title	Business Development 1
Location	Den Bosch
Coordinator	Mark Copsey (CoM)
Type of course unit	☒ Mandatory ☐ Not mandatory
Language of instruction	English
Credits (ECTS)	6
Moment of delivery	Year 2 Term 3
Prerequisites	None
Application deadline	1-5-2022
Content	This course covers: - Introduction into entrepreneurship and (international) business start up to achieve social and environmental impact. - Develop a (draft) business ideas to feed into a self-elaborated business venture. - Conduct a statistical (quantitative) analysis of a market survey.

Achieved Learning Outcomes prior to this module	To participate successfully, students should be able to:
	
	Q3 Contributing to New Business Models
	- Recognise and understand logistical steps and principles in international agri-food supply chains;
	- Determine the financial and sustainability implications of inventory and warehousing decisions;
	- Recognise and apply the fundamentals of Marketing;
	- Identify, explain and demonstrate financial management and costing principles, (financial and cost) structures, investments and annual reports:
	  - Explain financial management principles in given examples;
	  - Carry out financial structure assessment of international agri-food businesses;
	  - Use cost structure and apply costing principles;
	  - Explain used financials in annual reports and draw conclusions;
	  - Explain how True Cost Accounting as tool can be effective to address the pervasive imbalance in our agri-food system;
	- Recognise and understand different organisation structures, management, and leadership styles of companies (SMEs);
	- Recognise and understand the internal/external factors that determine internal organisation/management.
	
	Q7 Conducting Applied Research
	- Perform some basic calculations (mean, standard deviation) on a given data set in Excel with given data;
	- Formulate a main question and useful sub-questions in their own words, based on a given case;

	- Select, analyse and combine information from implicitly given sources with extra information they have found themselves; - Select sources (secondary data) that are relevant and reliable; - Judge external information leading to the formation of an opinion.
Learning outcomes	The module contributes to the following program qualifications: Q3. New Business Models Q6. Project management Q7. Doing research After successful completion, the student is able to: Q3: Analyse & evaluate (sustainable) business opportunities based on a created (Sustainable) Business Venture: - Management & Entrepreneurship: evaluate and demonstrate the organisational feasibility based on (theories of) management & entrepreneurship in a self-elaborated business venture; - Logistics: evaluate and demonstrate logistical steps and principles in international agri-food supply chains; - Financial management: distil the financial implications based on your assumptions, design a clear revenue model, and deliver a 3-year financial plan. Q6: Complete tasks and prioritise within a group project in a multi-disciplinary company context: - Apply methodologies, techniques and tools of project management. Q7: Student executes applied research and contributes to its design - Apply various research methodologies for collection of (primary) data of acceptable quality; - Statistical analysis & calculations on a (given) data set from a market survey; - Apply interview techniques, case studies; - Analyse and judge collected data for discussion and formulating conclusions and advice).

Learning activities and teaching methods	Method	Study load (hours)
	Thematic lectures	25
	Working lectures (interactive)	13
	Guest lectures	5
	Company visits(s)	5
	Group project: business case (concept)	80
	Private study / exam	40
	Total	168

Test matrix

Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
Written test Statistics	WRT	1	4.0	1-10	IND	Wk 9	Next term
Assignment Business Development 1	ASSI	1	4.0	1-10	IND	Wk 9	Next term

Project Business Development 1	PROJ	2	4.0	1-10	GRP	Wk 10	Next term

Study materials

The study material builds on IFA Year 1 + 2 so far, and so these resources remain relevant (i.e. The Basics of Financial Management by Brouwers, Doing Research by Verhoeven; Marketing Fundamentals by Verhage; Organisation & Management by Marcus; and Project Management by Gritt). Those listed below are additional resources for this course.

Title	Author	Status	Type	Code/comments
Course Manual	M. Copsey	Required	Digitally available	Updated each year
Business development reader	Multiple authors	Required	Digitally	Reader
Statistics and 'R'	HAS University of Applied Sciences	Required	Digitally available	Reader
The Sustainable Business Handbook	D. Grayson	Required	Book	ISBN 9781398604049
The Design Thinking Toolbox	M. Lewrick	Recommended	Tools	Soft copy available
Disciplined Entrepreneurship	B. Aulet	Recommended	Book	Soft copy available
Design a Better Business	P. van der Pijl	Recommended	Book	Soft copy available

Estimated cost

Cost item	Approximate cost in €	Comments
Literature/books	€45.- for required book €80.- for additional books (if not in possession yet)	
Group excursion (by bus)	€15	
Other travel	About €25	Small excursion / group work, by own transportation. Based on estimated costs for public transport.
Remarks	-	

Course information	Year of study: 2022-2023 Version: 04-2022
Study Programme	International Food and Agribusiness
Course unit code	IF2446
Course unit title	Food Systems Governance
Location	Den Bosch
Coordinator	Bram van Helvoirt (HeBr)
Type of course unit	☒ Mandatory ☐ Not mandatory
Language of instruction	English
Credits (ECTS)	8
Moment of delivery	Year 2 Term 3
Prerequisites	None
Application deadline	1-5-2022
Content	Within the Food Systems Governance module, the following topics are covered: - The human right to food; - The (changing) roles, interests and responsibilities of government, private sector and civil society in the governance of food systems; - Public and private governance of food systems and global agri-food chains; - Food systems governance issues relating to sustainability, justice and democracy; - Food trade in relation to food sovereignty; - Policy (in)coherence and food politics; - Analysis and real-life exploration of international food systems; - Moral dilemmas in the global food system and ethical sensitivity. -
Achieved Learning Outcomes prior to this module	- Q1 Student understands the global food system and its outcomes - Understand the architecture, functioning, dynamics and outcomes of the global food system. - Understand the concept of sustainability - Understand the principles of systems thinking - - Q3 Student understands agro-food production and consumption, their interrelations and sustainability impact - Recognize and understand consecutive steps in the manufacturing of agri-food products - Identify consecutive processes throughout the supply chain of a food product - Recognize and understand logistical steps and principles in international agri-food supply chains - - Q5 Student shows awareness of personal talents and competences - Understands the basics of giving & receiving feedback - Understand what an ethical dilemma is and recognize it - Q6 Student actively contributes to projects as part of a team

<table>
<tr><td></td><td>
- Plan project activities in a project team
- Complete steps in a project in a timely manner
- Apply a clear structure (format) in a project report
- Present project results in a convincing (structure, form) manner
- Apply correct referencing in reporting
- Write a well-structured project report

Q7 Student executes consecutive steps in applied research
- Formulate a main question and useful sub-questions in their own words, based on a given case
- Select, analyze and combine information from implicitly given sources with extra information they have found themselves
- Select sources (secondary data) that are relevant and reliable
- Judge external information leading to the formation of an opinion
</td></tr>
<tr><td>Learning outcomes</td><td>
The module contributes to the following program qualifications:

1. Improving Sustainability of the Global Agri-Food System
3. Contributing to New Business Models
5. Value-based leadership
7. Conducting Applied Research

After successful completion, the student is able to:

Q1 Student applies knowledge on the governance and sustainability of food systems to contribute to a solution in a clearly arranged situation
- Interpret the governance of the global food system from an institutional and political economy perspective;
- Analyse existing policy interventions in the food system to assess their effectiveness;
- Engage with food system actors in a real-life international setting to understand system functioning and outcomes

Q3 Student identifies opportunities in agri-food markets and international supply chains and with that contributes to business development
- Understand international agrifood trade patterns and policy instruments and how these influence the business climate for agrifood SMEs

Q5: Student evaluates personal talents and competences, and reflects on ethical issues, leading to personal leadership
- Demonstrate intercultural (disciplinary and stakeholder) awareness;
- Reflect on ethical issues

Q7: Student executes applied research and contributes to its design
- Performing qualitative research
</td></tr>
<tr><td>Learning activities and teaching methods</td><td>
<table>
<tr><th>Method</th><th>Study load (hours)</th></tr>
<tr><td>(Guest) lectures</td><td>30</td></tr>
<tr><td>Assignment tutorials</td><td>10</td></tr>
<tr><td>Other tutorials</td><td>10</td></tr>
</table>
</td></tr>
</table>

	International excursion + preparation tutorials	80
	Excursion to Brussels	10
	Self-study (including assignment)	84
	Total	224

Test matrix

Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
Written test	WRT	1	5.5	0-10	IND	Wk 9	Next term
Assignment	ASSI	1	4.0	0-10	GRP	Wk 8	Next year or tbd*
International Excursion	ASSI	0	PASS	Pass/fail	GRP	Wk 10	Next year or tbd*

*The retake options depend on the reason(s) for failing the assignment/excursion. The lecturer or coach therefore decides upon the exact substitute assignment or re-sit possibility, and does this in consultation with the module coordinator

Study materials

Title	Author	Status	Type	Code/comments
Study Manual	Helvoirt, B. van	Required	Digitally available	Updated each year
Food Systems Governance reader	Helvoirt, B. van	Required	Digitally available	Updated every year
Changing the Game	Simons, L and Nijhof, A.	Required	Book	Already in possession
Doing research - the hows and whys of applied research	Nel Verhoeven (4th edition)	Required	Book	Already in possession
Cultures and Organisations – software of the mind	Hofstede, Hofstede & Minkov	Required	Book	Already in possession

Estimated cost

Cost item	Approximate cost	Comments
Literature/books	(€ 200)	If not in possession yet
Excursion Brussels	€25	Study visit to EU institutes
International excursion	Depending on country of destination	Students will be involved in the preparation of excursion programme.

Remarks	The Food Systems Governance module is a merger of the previous Food Governance and International Excursion modules (former IFA curriculum, up to 2021). The Food Systems Governance module was given for the first time in term 3 of study year 2021-2022.

Course information	Year of study: 2022-2023 Version: 03-2022
Study Programme	International Food and Agribusiness
Course unit code	IF2447
Course unit title	Business Development 2
Location	Den Bosch
Coordinator	Mark Copsey (CoM)
Type of course unit	☒ Mandatory ☐ Not mandatory
Language of instruction	English
Credits (ECTS)	6
Moment of delivery	Year 2 Term 4
Prerequisites	None
Application deadline	1-5-2022
Content	This module covers: - Entrepreneurship and (sustainable) business development options and challenges in emerging markets. - Construct a full-elaborated start up business proposition designed to achieve impact in an emerging market.
Achieved Learning Outcomes prior to this module	To participate successfully, students should be able to: Q3 Contributing to New Business Models - Recognise and understand logistical steps and principles in international agri-food supply chains; - Determine the financial and sustainability implications of inventory and warehousing decisions; - Recognise and apply the fundamentals of Marketing; - Identify, explain and demonstrate financial management and costing principles, (financial and cost) structures, investments and annual reports: - Explain financial management principles in given examples; - Carry out financial structure assessment of international agri-food businesses; - Use cost structure and apply costing principles; - Explain used financials in annual reports and draw conclusions; - Explain how True Cost Accounting as tool can be effective to address the pervasive imbalance in our agri-food system; - Recognise and understand different organisation structures, management, and leadership styles of companies (SMEs); - Recognise and understand the internal/external factors that determine internal organisation/management; Q7 Conducting Applied Research - Perform calculations (percentage, equations, exponential functions) on a given assignment and/or data set in Excel; - Select, analyse, and combine information to formulate main/sub-questions; - Select, analyse and combine information from implicitly given sources with extra information they have found themselves; - Select sources (secondary data) that are relevant and reliable; - Judge external information leading to the formation of an opinion.
Learning outcomes	The module contributes to the following program qualifications:

	Q3. New Business Models Q6. Project management Q7. Doing research After successful completion, the student is able to: Q3: Analyse & evaluate (sustainable) business opportunities based on a created (Sustainable) Business Venture: - Financial management: distil the financial implications based on your assumptions, design a clear revenue model, and deliver a 3-year financial plan; - Management & Entrepreneurship: evaluate and demonstrate the organisational feasibility based on (theories of) management & entrepreneurship in a self-elaborated business venture; - Logistics: evaluate and demonstrate logistical steps and principles in international agri-food supply chains; - Business environment: evaluate and demonstrate inclusive business development approaches in a self-elaborated business venture in the context of an emerging market. Q6: Complete tasks and prioritize within a group project in a multi-disciplinary company context - Apply methodologies, techniques and tools of project management. Q7 Student executes applied research and contributes to its design - Apply various research methodologies for collection of (primary) data of acceptable quality; - Statistical analysis & calculations on a (given) data set from a market survey; - Apply interview techniques, case studies; - Analyse and judge collected data for discussion and formulating conclusions and advice.

Learning activities and teaching methods	Method	Study load (hours)
	Thematic lectures	25
	Working lectures (interactive)	14
	Guest lectures	6
	Company visit	5
	Group project: business plan (concept)	78
	Private study / exam	40
	Total	168

Test matrix

Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
Written test Business Development 1 + 2	WRT	2	5.5	1-10	IND	Wk 9	Next term
Project Business Development 2	PROJ	2	4.0	1-10	GRP	Wk 10	Next term

Study materials				
The study material builds on IF2445 Business Development 1 and so these resources remain relevant. Those listed below are additional resources for this course.				
Title	**Author**	**Status**	**Type**	**Code/comments**
Course Manual	M. Copsey	Required	Digitally available	Updated each year
Social Innovation in Africa	N. Okonkwo Nwuneli	Required	Book	ISBN 9781138182844
Business Experimentation	R. James; J. Goddard	Recommended	Book	ISBN 9781398601673
Testing Business Ideas	D. Bland	Recommended	Book	ISBN 9781119551447
Business Model Generation	A. Osterwalder	Recommended	Tools	Available on www.strategyzer.com
Entrepreneurial Marketing	E. Nijssen	Recommended	Book	ISBN 9780367445324

Estimated cost		
Cost item	**Approximate cost in €**	**Comments**
Literature/books	€80.- for required book €80.- for additional books (if not in possession yet)	
Group excursion (by bus)	€15.-	
Other travel	About €25.-	Small excursion / group work, by own transportation. Based on estimated costs for public transport.
Remarks	-	

Course information	Year of study: 2022-2023 Version: 03-2022
Study Programme	International Food and Agribusiness
Course unit code	IF2448
Course unit title	Extension on Sustainability (ExtenS)
Location	Den Bosch
Coordinator	Jeannette van de Steeg
Type of course unit	☒ Mandatory ☐ Not mandatory
Language of instruction	English
Credits (ECTS)	8
Moment of delivery	Year 2 Term 4
Prerequisites	None
Application deadline	1-5-2022
Content	In many of the jobs IFA graduates will take on, advising colleagues, organisations and entrepreneurs on sustainability issues will be of vital importance; e.g. the efficient use of resources, food and/or residues. In this module, students are confronted with a real-life situation in which they can develop these skills. In small groups (approximately 3 students), students take on the role of a consultant for a company in the agri-food business. The company is facing a sustainability issue. Students will interview the owner or manager and analyse the issue thoroughly. They will quantify the sustainability of the company, and use this as the basis for the advice to the company regarding the options for improvement. In this project, supervised by a tutor, both knowledge and skills are applied. The lectures are on Sustainable Engineering; how to calculate footprint? Four footprints are discussed; CO_2, N, P, water. In workshops, several aspects of consultative selling are covered.
Achieved Learning Outcomes prior to this module	Q2: Student analyses (international) developments and opportunities towards sustainable agrofood production and consumption - Student can evaluate options to valorize waste streams of food production systems - Student can illustrate the impact of valorizing options on resources, environment and health - Student can compute the amount of streams and resources in food the production system Q4. Creating Change - Student can apply basic advisory skills, throughout a brief and controlled advisory process commissioned Q5. Value-based leadership - Give and receive feedback in projects, in order to reflect on own personal development (in relation to others) Q6. Project management - Write a structured and complete project proposal - Compose a project plan (including planning/ budgeting/ risk assessment) Q7 (Conducting Applied Research) - Describe relevant research methodologies (experiments) - Write a theoretical background using up to date and trustworthy information sources - Formulate and test a hypothesis - Choose proper methods to answer the research question and justify the use of the methods,

	- Collect data in a correct and organised manner - Discuss results and methods - Formulate conclusions and recommendations
Learning outcomes	The module contributes to the following program qualifications: 2. Sustainable production and consumption 4. Creating Change 5. Value-based leadership 6. Project management 7. Conducting Applied Research After successful completion, the student is able to: Q2: - Quantify the environmental impact of simple agri-food systems Q4: - Apply basic advisory skills, throughout a brief and controlled advisory process commissioned by an external client Q5: - Give and receive feedback in projects, in order to reflect on own personal development (in relation to others) Q6: - Compose a project plan for a real-life assignment (including planning/budgeting/risk assessment) Q7: - Conduct qualitative research by analysing interviews (coding), focusing on providing an advise

Learning activities and teaching methods	Method	Study load (hours)
	Lectures Sustainable Engineering	14
	Private study and written test on Sustainable Engineering	28
	Workshops Communication Skills	14
	Private study and oral on Communication	28
	Group Project Foot-printing	140
	Total	224

Test matrix

Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
Written test	WRT	1	5.5	0-10	IND	Wk 9	Next term
Oral exam Communication	ORAL	1	5.5	1-10	IND	Wk 10	Wk 11
Project	ASSI	1	4.0	pass/ fail	GRP	Wk 10	Next term

Study materials

Title	Author	Status	Type	Code/comments
Study Manual	Various	Required	Digitally available	Updated each year

Reader Sustainable Engineering	M. van Eerten	Required	Digitally available	
Doing research - the hows and whys of applied research	Nel Verhoeven (4th edition)	Required	Book	Already in possession
Project Management, A practical Approach	Grit, R.	Required	Book	Already in possession
Strengths Finder 2.0	Rath, T.	Required	Book + code	Already in possession
Lecture hand-outs, additional literature, articles	Various		Digitally available	Indicated per year
Estimated cost				
Cost item	Approximate cost		Comments	
Literature/books	(€90)		If not in possession yet	
Other travel	About €75		Cost for own transportation is depending on where client is located.	
Remarks	-			

Course information	Year of study: 2022-2023 Version: 03-2022
Study Programme	International Food and Agribusiness
Course unit code	IF2450
Course unit title	Personal Leadership 2
Location	Den Bosch
Coordinator	Milouska Lensing-Molenaars (MMi)
Type of course unit	☒ Mandatory ☐ Not mandatory
Language of instruction	English
Credits (ECTS)	4
Moment of delivery	Year 2 Term 1-4
Prerequisites	IF1420 Personal Leadership 1
Application deadline	1-5-2022
Content	The main goal of the Personal Leadership course is to teach the student how to instigate his or her personal development based on self-knowledge, personal motivation, learning goals, self-reflection, feedback & feed forward. The course offers opportunities to reflect on personality, behaviour and attitude. It provides students with tools for change and improvement and offers them guidelines for reaching personal objectives and exploring their talents, values and ambitions. Moreover, the Personal Leadership course teaches students how to critically self-reflect in relation to others, leading to personal leadership within relevant social, international and ethical dimensions. Personal Leadership in the second year of the IFA study program builds on the Personal Leadership course in year 1 (IF1420), in which the students mainly focused on their own personal talents and individual performance. This course not only helps students to further explore themselves but also to reflect upon their own personality, behaviour and attitude *in relation to others*. Next to that, they start making plans for their future (careers) and taking more and more responsibility for their personal growth and own study planning. They begin with short and medium-term planning for their Internship and Electives in year 3, as well as their Specialisation and Graduation project in year 4. Moreover, they are challenged to place these plans in a long-term career perspective (job orientation).
Achieved Learning Outcomes prior to this module	To participate successfully, students should be able to: Q 5. Value-based leadership - Understand the purpose of personal development (plan) & self-reflection - Identify personal talents - Connect with co-students &staff effectively (teambuilding) - Formulate learning aims, based on personal talents, as part of personal development plan - Understand the use of turning personal talents into strengths - Write a personal reflection report (incl. ethical dilemma), based on the personal development plan
Learning outcomes	Q 5. Value-based leadership (level 2) Student is able to give and receive feedback, evaluate personal talents and competences, and reflect on ethical issues, leading to personal leadership

	After successful completion, the students are able to: - Draw up a personal development year plan (PDP), based on previous self-reflection, including personal and/or professional learning aims and concrete actions to reach their goals - Explore and present an overview of their future study and career options - Create their own 'personal brand' and pitch themselves by means of a letter of application & CV, or via job interviews, social media and networking activities - (Use all input to) self-reflect in relation to others, and to critically evaluate themselves within relevant social, international and ethical dimensions.

Learning activities and teaching methods	Method	Study load (hours)
	Lectures	16
	Practicals	8
	Workshops	8
	Coach (group) sessions	15
	Individual coaching	5
	Self-study: PDP, assignments, selfreflection report	40
	Selfmanagement (SMHs)	20
	Total	112

Test matrix

Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
Self-reflection report (& 20 SMHs), incl. Year 3/4 planning	ASSI	0	PASS	pass/ fail	IND	Wk 10	Tbd**

** The retake options depend on the reason(s) for failing the assignment(s). The lecturer or coach therefore decides upon the exact substitute assignment or re-sit possibility, and does this in consultation with the module coordinator or other coaches

Study materials

Title	Author	Status	Type	Code/comments
Course Manual Personal Leadership Y2	Lensing-Molenaars, M.F.	Required	Digitally available	Updated each year
StrengthsFinder 2.0, Discover Your CliftonStrengths	Rath, T.	Required	Book + code	Already in possession (Y1)

Estimated cost

Cost item	Approximate cost in €	Comments
Literature/books	na	
Remarks		

Year 4

Course information	Year of study: 2022-2023 Version: 03-2022
Study Programme	International Food and Agribusiness
Course unit code	MN4411
Course unit title	Future Food Systems
Location	Den Bosch
Coordinator	Erwin Bouwmans (Bouw)
Type of course unit	☒ Mandatory ☐ Not mandatory
Language of instruction	English
Credits (ECTS)	30
Moment of delivery	Year 4 Term 1 + 2
Prerequisites	HAS students and students of other Dutch institutions: Propaedeutic diploma, plus 52+ ECTS of year 2 and 30+ ECTS of year 3, of which at least one finished internship in year 3. Credits are obtained in the IFA program or a related bachelors program in Agriculture, Agribusiness, Food production or Environmental studies. International admissions: Three years of higher education on bachelor's level of which at least 75% has been obtained and in which at least one major practical assignment or traineeship has been completed. Credits are obtained in a program related to Agriculture, Agribusiness, Food production or Environmental studies. Admissions are subjected to approval by the module team.
Application deadline	1-5-2022
Content	The current status of the agriculture sector is not so much the result of misguided intention, but more of system failure. Our supply chains are long and not always transparent. Our global markets are designed to go for the lowest price, irrespective of the longer-term consequences for the stakeholders involved. Besides creating mainstream market demand as a driver for change, support services need to be structurally strengthened and rebuilt, national government policies need to be reformed and financial institutions need to learn to look at agriculture as a business opportunity and invest in its modernization. Transformation of the current system and, in the meantime, Innovation in the current chains and businesses are necessary and taking place. With Global Food Systems in IFA year 1 the curriculum started four years ago with investigating the international food system. Now, in IFA year 4 the MN4411 module inspires students to reach for the next level (3) on all IFA qualifications via deeper investigating production chains and come up with ideas for transition and improvement; ideas that enhance both sustainability and business. The module sheds light on the innovation process and on the transformation into a new system. Students are also stimulated to enlarge their professional network. The module focuses on 'Value Based Change Management'; how to improve the world into a better place, starting with your own inner values leading to a value based change of the agro-food system. This Year 4 Specialisation is divided into four main topics: 1. Transition of a sector or country in a wider system with other stakeholders (government, knowledge institutions, civil society) using Multi Level Perspective and building Future Scenarios. 2. Leadership and Personal leadership, and development hereof.

	3. Circular Calculation at process and company (link) level within the current situation, using True Cost Accounting and Multi Criteria Analysis. 4. Domain: crop, animal, or food production.
Learning outcomes	The module contributes to all program qualifications, partly at the final level: 1. Improving sustainability of the Global Agro-food system 2. Applying bio-based & circular economy principles in agro-food systems (final) 3. Contributing to sustainable innovation in a sector (animal production, crop production or food processing/nutrition) (final) 4. Contributing to international business development 5. Providing advice 6. Networking & influencing 7. (Self)-reflection and judgement 8. Project management 9. Doing research (final) After successful completion, the student is able to: Q1 - analyse business /sectors in the context of a global food system (past) - to analyse future trends and to develop future scenarios - perceive a supply chain as a system, and oversee the players in it Q2 - interrelate processes and business practices regarding agro-food systems - contribute to circular/bio-based agro-food systems, using multi criteria analysis and/or impact analysis Q3 - complete analysis of production systems to identify long term trends and opportunities within the (animal, crop or food) sector - apply insights in current developments in his/her domain to identify opportunities in his/her domain production systems that contribute to more sustainable systems Q4 - come up with new business ideas for an existing company to improve sustainability - compare and select different future business options using true cost accounting - identify promising niches and new business models from future scenario studies Q5 - provide advice on options for the implementation of a sustainability project within a production field Q6 - contribute to transitions in a niche, business or project (internal) - contribute to transitions in a network with stakeholders (external) Q7 - identify and understand personal and interpersonal strengths - reflect on personal Value Based Leadership in the light of the ever-changing agro-food complex - reflect on the development of one's own talents and those of fellows in a group Q8 - select and justify project management method - write a complete project plan in a complex situation in relation with the client

	- execute a project according to planning and budget (resources and money) - effectively manage projects showing effective project management skills - recognize and evaluate his/her own role in a group - place own role within the larger context - clearly communicate within multi-stakeholder environment and manage expectations - identify connections within a sector and determine the common objectives for projects and collaboration Q9 - design and execute a professional research which answers research questions on a topic related to sustainable innovation in his/her domain (crop, animal or food)

Learning activities and teaching methods	Method	Study load (hrs)
	Thematic lectures and excursions on Transition and Scenarios	56
	Lectures Project management	28
	Leadership; College Tours, Workshops, Food Experience	168
	Circular Calculation; lectures, workshops	56
	Domain; lectures doing research, Individual Research, Domain lectures	252
	Group Project in which students apply content to a real-life case	280
	Total	840

Test matrix

Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
Reflection report (Personal leadership)	ASSI	3	4.0	1-10	IND	Wk 16	Term 3
Individual research	ASSI	5	5.5	1-10	IND	Wk 18	Term 3
Domain test	ASSI	2	4.0	1-10	IND	Wk 15	Term 3
Project report & presentation	PROJ	10	5.5	1-10	GRP	Wk 19	tbd
Attendance & excursions	ASSI	0	pass	pass/fail	IND	Wk 20	tbd

Study materials

Title	Author	Status	Type	Code/comments
Study Manual, 2021	various	Required	Digitally available	Updated each year
How to Do Research	Grit, R. and Julsing, M.	Required	Book	Already in possession (yr 2)
Project Management	Grit, R.	Required	Book	Already in possession (yr 1)
Strengths Finder 2.0	Rath, T.	Required	Book + code	Already in possession
Changing the Food Game	Simons, L.	Required	Book	Already in possession
The 7 Habits of Highly Effective People	Covey (2013, or later)	Required	Book	ISBN 978 147 112 9391
Lecture hand-outs, add. literature and articles	various	Required	Digitally available	Indicated per year

Estimated cost		
Cost item	Approximate cost in €	Comments
Literature/books	25	Most books are already in possession
Group Excursion (by bus)	50	
Other travel	100	Travel for additional excursions / group work for project, on public transport base
Remarks	If and when Corona rules are in place, the module will be adjusted accordingly.	

Course information system		Year of study: 2022-2023 Version: 2022
Study Programme	International Food and Agribusiness	
Course unit code	IF4403	
Course unit title	Professional Assessment	
Location	Den Bosch	
Coordinator	Milouska Molenaars (MMi)	
Type of course unit	☒ Mandatory ☐ Not mandatory	
Language of instruction	English	
Credits (ECTS)	2	
Moment of delivery	Year 4 Term 1+2 or Term 3+4	
Prerequisites	IF1420 Personal Leadership Y1, IF2450 Personal Leadership IF2, Year 3 reflections and/or MN4411 FFS-Personal Leadership report	
Application deadline	1-9-2021	
Content	Students spend approximately 15 weeks working on a portfolio in which they reflect on their professional and personal development. This portfolio should provide the 'proof' of their development over the past few years, and include data and information to support their reflections. Coaching sessions and guest lectures from amongst others (international) recruiters and IFA alumni will guide them in this process. At the end of term 2 or 4, a professional assessment interview will take place during which the student will present and discuss the content of this portfolio. This interview resembles a professional job interview and is conducted by an IFA examiner and an external person from the IFA professional field.	
Learning outcomes	The module contributes to the following program qualifications: 5. Value Based Leadership *After successful completion, the student is able to:* o reflect on own skills and competences and personal development in relation to the IFA qualifications and the study program as a whole. o demonstrate the ability to convert feedback (both requested and not) into actions, leading to self-development. In addition, the student demonstrates the ability to use the project team's qualities to allow the project to function in the best possible way.	

Learning activities and teaching methods	**Method**	**Study load (hours)**
	Introduction lecture and Feedback Leadership	3
	Guest lectures International Recruitment (2)	4
	Portfolio development & preparation assessment	35
	2 interviews with professionals from the industry	10
	Criterion focused interview	4
	Total	**56**

Test matrix

Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
Criterion focused interview (incl. portfolio)	ORAL	0	pass	pass/fail	IND	T2 or T4 (1 hr)	tbd

Study materials				
Title	**Author**	**Status**	**Type**	**Code/comment**
Course Manual Professional Assessment	Lensing, M.F.	Required	Digitally available	Updated each year

Estimated cost		
Cost item	**Approximate cost in €**	**Comments**
n.a.		
Remarks		