



**HAS UNIVERSITY OF APPLIED  
SCIENCES**

**STUDY PROGRAMME**

INTERNATIONAL FOOD &  
AGRIBUSINESS (IFA)

ACADEMIC YEAR 2017-2018

**COURSE CATALOGUE** *(v.0617)*



## Course catalogue

The IFA course catalogue lists all courses offered for the 2017-2018 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 2017-2018 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 2017 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](http://www.hasinternational.nl).

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*Version: 0617*

## Curriculum International Food & Agribusiness - ACADEMIC YEAR 2017/18

	Term 1	Term 2	Term 3	Term 4
Year 1	IF1401 Global Food Systems (6 )	IF1402 Agri- Food Business (6)	IF1405 Biobased Economy (6)	IF1414 & IF1415 Work Experience Placement (Internships) (12)
	IF1412 Crop Production (6)	IF1413 Animal Production (6)	IF1404 Food (6)	
	IF1416 Coaching & Skills IF1.1 (3)	IF1417 Coaching & Skills IF1.2 (3)	IF1418 Coaching & Skills IF1.3 (3)	IF1419 Coaching & Skills IF1.4 (3)
Year 2	IF2416 Supply Chain Management (6)	IF2438 Food Governance (5)	IF2418 Sustainable Trade (5)	IF2439 Business Plan 2 (6)
	IF2435 Circular Economy I (4)	IF2417 Business & Marketing (5)	IF2437 Business Plan 1 (4)	IF2409 Extension on Sustainability (8)
	IF2421/IF2423/IF2424 Domain Track (Food, Animal or Crop) (6)		IF2436 Circular Economy II (3)	
	IF2431 Coaching & Skills IF2.1 (2)	IF2432 Coaching & Skills IF2.2 (2)	IF2433 Coaching & Skills IF2.3 (3) <i>incl. International Excursion</i>	IF2440 Coaching & Skills IF2.4 (1)
Year 3	IF3(various codes) Internship(s) & choice of Exchange & Minor(s) (45-60)			Optional: MN3403 International Business Development (15)
Year 4	MN4411 Future Food Systems (30)		IF4450 Professional Assignment (28)	
			IF4403 Professional Assessment (2)	

# Contents

Course catalogue..... 3

YEAR 1..... 6

YEAR 2.....28

YEAR 3.....60

YEAR 4.....64

*Per year, the modules are in numbered order. See table for full overview of curriculum.*

## YEAR 1

Course information system		Year of study: 2017-2018 Version: draft 05-2017					
<b>Study Programme</b>	International Food and Agribusiness						
<b>Course unit code</b>	IF1401						
<b>Course unit title</b>	Global Food Systems						
<b>Location</b>	Den Bosch						
<b>Coordinator</b>	Jeannette van de Steeg (SteJ)						
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory						
<b>Language of instruction</b>	English						
<b>Credits (ECTS)</b>	6						
<b>Moment of delivery</b>	Year 1                      Term 1						
<b>Prerequisites</b>	None						
<b>Application deadline</b>	1-5-2017						
<b>Content</b>	In this module Global Food Systems (GFS) diverse elements of the global food system are discussed. Important topics are food security, environmental impact of food production, stakeholders in agri-food chains and sustainability.						
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <p>1. Improving sustainability of the Global Agri-food system 6. Networking &amp; influencing 8. Project management (PBL) 9. Doing Research (PBL)</p> <p><i>After successful completion, the student is able to:</i></p> <p>Ad 1:</p> <ul style="list-style-type: none"> <li>- Explain the concept of food security;</li> <li>- Explain the concept of agri-food supply chains and players herein;</li> <li>- Describe the Global Food System;</li> <li>- Explain the concept of sustainability;</li> <li>- Explain the main global environmental issues in relation to the agri-food systems and the chains;</li> <li>- Apply the basic principles of systems thinking to a given case.</li> </ul> <p>Ad 7:</p> <ul style="list-style-type: none"> <li>- Identify relevant stakeholders and their role in the global food system.</li> </ul> <p>Ad 8 +9:</p> <ul style="list-style-type: none"> <li>- See PBL rubric (level 1 beginner)</li> </ul>						
<b>Learning activities and teaching methods</b>	<b>Method</b>					<b>Study load (hours)</b>	
	Lectures, related activities, private study					93	
	PBL (Problem Based Learning, 5 cases)					75	
	<b>Total</b>					<b>168</b>	
<b>Test matrix</b>							
<b>Part</b>	<b>Type of examination</b>	<b>Weighting factor</b>	<b>Bottom grade</b>	<b>Rating scale</b>	<b>Individual/ Group work</b>	<b>Time of examination (duration)</b>	<b>Resit</b>
Written Test (on reader, lectures and PBL cases)	WRT	1	5.5	1-10	IND	Wk 9 (2 hrs)	Next term
PBL	ASSI	0	pass	pass /fail	IND	Wk 1-8	Next term

<b>Study materials</b>				
<b>Title</b>	<b>Author</b>	<b>Status</b>	<b>Type</b>	<b>Code/comment</b>
Reader Global Food Systems	Bekkers, N.	Required	Via Blackboard	Updated each year
Study Manual Global Food Systems	Steeg, J. van de, Bekkers, N.	Required	Via BlackBoard	Updated each year
<b>Estimated cost</b>				
<b>Cost item</b>	<b>Approximate cost in €</b>		<b>Comments</b>	
	€			
<b>Remarks</b>	-			

Course information system		Year of study: 2017-2018 Version: draft 5-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF1402	
<b>Course unit title</b>	Agri-Food Business	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Peter van Schie (ScPe)	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	6	
<b>Moment of delivery</b>	Year 1	Term 2
<b>Prerequisites</b>	None	
<b>Application deadline</b>	1-5-2017	
<b>Content</b>	This course offers students an insight into the affairs of international agri-food supply chains; general aspects are addressed and three chains are dissected into detail (tomato, poultry, beer). Students will explore business opportunities in emerging countries. In the 'Introduction to Marketing'-section students will learn the basic principles of strategic marketing.	
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <p>1. Improving sustainability of the Global Agri-food system; 4. Contributing to international business development.</p> <p><i>After successful completion, the student is able to:</i></p> <p>Ad 1:</p> <ul style="list-style-type: none"> <li>- explain the concept of agri-food supply chains and players herein <ul style="list-style-type: none"> <li>o identify consecutive processes and corresponding companies throughout the supply chain of a food product</li> <li>o map a simple agri-food chain and quantify product flows within this chain</li> </ul> </li> <li>- explain the main global issues in relation to the agri-food system and the chains <ul style="list-style-type: none"> <li>o identify sustainability issues in preselected supply chains</li> </ul> </li> </ul> <p>Ad 4:</p> <ul style="list-style-type: none"> <li>- recognize and apply on a basic level the fundamentals of marketing <ul style="list-style-type: none"> <li>o recognize demands and needs of consumers</li> <li>o define the concepts of adding value, external analysis, market segmentation and positioning</li> <li>o define the elements of a marketing mix (4P's)</li> </ul> </li> <li>- understand the basic elements of logistics <ul style="list-style-type: none"> <li>o make calculations regarding the bull whip effect</li> <li>o understand the importance of economies of scale in logistics</li> </ul> </li> </ul>	
<b>Learning activities and teaching methods</b>	<b>Method</b>	<b>Study load (hours)</b>
	Theory is provided in weekly instruction lectures	28
	Excursion. Students will visit a tomato, chicken and/or beer company to experience the activities of a link in the chain and to learn about the rest of the chain.	24
	For the group project, tutor meetings are scheduled	12
	Group work on assignments	58



	Private study					46	
	<b>Total</b>					<b>168</b>	
<b>Test matrix</b>							
Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
Written exam on supply chains	WRT	2	4.0	1-10	IND	Wk 9 (2 hrs)	Next term
Assignment on supply chains	ASSI	2	5.5	1-10	GRP	Wk 8	Next year
Written exam on marketing	WRT	1	4.0	1-10	IND	Wk 9 (2 hrs)	Next term
Portfolio marketing	ASSI	1	5.5	1-10	GRP	Wk 8	Next term
Attendance/participation excursions	EXCU	0	pass	pass/fail	IND		Next year
<b>Study materials</b>							
Title	Author	Status	Type	Code/comments			
Global Value Chains – Linking Local Producers from Developing Countries to International Markets (selected chapters)	M.P. van Dijk and J. Trienekens	Required	Book (digital)	Amsterdam University Press  via BlackBoard / website			
Agro-industrial supply chain management: concepts and applications	J. van der Vorst, C.A. da Salva and J. Trienekens	Recommended	Occasional paper	ISBN 978-92-5-105831-2 FAO			
Marketing Fundamentals - An International Perspective, Second edition 2013	B.J. Verhage	Required	Book	ISBN 978-90-01-81866-1 Noordhoff Uitgevers			
Study Manual (Agri-Food Business)	Muijlwijk, T. van, en P. van Schie	Required	Via Blackboard	Updated each year, make a print!			
Lecture hand-outs, additional literature and articles	various	Required	Via Blackboard	Indicated per year			
<b>Estimated cost</b>							
Cost item	Approximate cost in €	Comments					
Literature/books	€100	Book Marketing Fundamentals is used throughout the programme.					
Group Excursions (by bus)	€20						
Other travel		Group work, by own transportation. Based on estimated costs for public transport.					
Other study material	€5						
<b>Remarks</b>	Supply chain assignment has been redesigned.						

Course information system		Year of study: 2017-2018 Version: draft 5-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF1404	
<b>Course unit title</b>	Introduction Food	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Barbara van Mossevelde (MoB)	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	6	
<b>Moment of delivery</b>	Year 1                      Term 3	
<b>Prerequisites</b>	None	
<b>Application deadline</b>	1-11-2017	
<b>Content</b>	<p>In the '<i>Food processing</i>' part the student is given an introduction in general production and processing aspects of food. Students will learn about the main components of ingredients and their application for food.</p> <p>In the lectures about '<i>Nutrition</i>', students will get 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.</p> <p>Throughout the course students work on a <i>group project</i> analysing 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.</p>	
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <ol style="list-style-type: none"> <li>1. Improving sustainability of the Global Agri-food system;</li> <li>3. Contributing to sustainable innovation in a sector (food processing/nutrition);</li> <li>8. Project management.</li> </ol> <p><i>After successful completion, the student is able to:</i></p> <p>Ad 1:</p> <ul style="list-style-type: none"> <li>- explain the concept of food security <ul style="list-style-type: none"> <li>o discuss food security from a nutrient perspective</li> </ul> </li> <li>- explain the concept of agri-food supply chains and players herein <ul style="list-style-type: none"> <li>o map a simple agro-food chain of a food commodity product</li> </ul> </li> <li>- describe the Global Food System <ul style="list-style-type: none"> <li>o restate factors that influence individual eating habits and food culture</li> </ul> </li> <li>- explain the main global issues in relation to the agri-food system and the chains <ul style="list-style-type: none"> <li>o identify sustainability issues for the researched supply chain of a commodity product</li> </ul> </li> </ul> <p>Ad 3:</p> <ul style="list-style-type: none"> <li>- interpret how the (chemical) structure of macronutrients and other food components influences the functional properties of a food product</li> <li>- interpret how product composition, processes and storage conditions effect the functional quality (microbial, physical, sensory, and chemical stability)</li> <li>- recognise the purpose of various processing steps when in a production environment</li> <li>- describe different types of food spoilage and categories of hazards to food safety</li> <li>- demonstrate awareness of the importance of personal hygiene in food production facilities and acts accordingly (professional attitude)</li> <li>- explain the role of macronutrients, water, and micronutrients (vitamins and minerals in general) in the body and its relationship to health</li> </ul>	

	<ul style="list-style-type: none"> <li>- assess the nutritional value of a food or simple meal in relation to nutritional requirements and based on various nutrient recommendations and dietary guidelines</li> </ul> <p>Ad 8:</p> <ul style="list-style-type: none"> <li>- set up a simple and well-structured project plan <ul style="list-style-type: none"> <li>o recognize elements of a project plan</li> <li>o compose a simple project plan (with project description, activities, planning and team roles) in a predefined situation</li> <li>o execute a simple project according the project plan, in a group setting</li> <li>o attend group meetings and arrive on time</li> <li>o complete assignments on time and stick to agreements</li> <li>o contribute to group discussion</li> <li>o demonstrate a cooperative and supportive attitude</li> </ul> </li> </ul>						
<b>Learning activities and teaching methods</b>	<b>Method</b>					<b>Study load (hours)</b>	
	Theory and background information is provided in weekly instruction lectures. Assignments and practicals will provide application of the theory.					Lectures: 32 Practicals: 10	
	For the group project, tutor meetings are scheduled. In addition, the groups work independently on the different sub-assignments. The project is assessed by means of a report and presentation.					Tutor meetings: 3 Group work: 40 Presentations: 3	
	During the excursion, students will visit a food producing company, to learn about production processes and quality in practice.					8	
	Private study					72	
<b>Total</b>					<b>168</b>		
<b>Test matrix</b>							
<b>Part</b>	<b>Type of examination</b>	<b>Weighting factor</b>	<b>Bottom grade</b>	<b>Rating scale</b>	<b>Individual/ Group work</b>	<b>Time of examination (duration)</b>	<b>Resit</b>
Written test on Processing and Nutrition	WRT	7	4.0	1-10	IND	Wk 9 (2 hrs)	Next term
Project 'Commodity to consumer product'	PROJ	3	4.0	1-10	GRP	Wk 10	Next year
Attendance/participation	ASSI	0	pass	pass/fail	IND	Wk 1-10	Tbd
<b>Study materials</b>							
<b>Title</b>	<b>Author</b>	<b>Status</b>	<b>Type</b>	<b>Code/comment</b>			
Introduction to Food Science & Food Systems	R. Parker and M. Pace	Required	Book	ISBN 978-1-4354-8939-4			
Project Management, A practical Approach	R. Gritt	Required	Book	ISBN 978-9-0018-5054-8			
Study Manual, 1718	B. van Mossevelde	Required	Via Blackboard	Updated each year			
Lecture hand-outs, additional literature and articles.	Various	Required	Via BlackBoard	Indicated per year			
<b>Estimated cost</b>							
<b>Cost item</b>	<b>Approximate cost in €</b>			<b>Comments</b>			
Literature/books	€30 €75			Project Management Intro to Food (via Hurkmans)			
Group Excursion (by bus)	€20						
<b>Remarks</b>	ASSI is changed to PROJ and ASSI (pass/fail) for attendance is added as separate assessment unit (was part of the group assignment)						

Course information system		Year of study: 2017-2018 Version: draft 5-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF1405	
<b>Course unit title</b>	Biobased Economy	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Jeannette van de Steeg (SteJ)	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	6	
<b>Moment of delivery</b>	Year 1                      Term 3	
<b>Prerequisites</b>	None	
<b>Application deadline</b>	1-5-2017	
<b>Content</b>	<p>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 to indicate business opportunities in the BBE. Finally, there are discussions whether there is sufficient biomass to both feed the world population AND for fuel production. The student will identify and list all biomass/biomolecule streams available to answer this question.</p>	
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <p>2. Applying bio-based &amp; circular economy principles in agri-food systems</p> <p>8. Project management (PBL)</p> <p>9. Doing Research (PBL)</p> <p><i>After successful completion, the student is able to:</i></p> <ul style="list-style-type: none"> <li>- Explain the relevance of a Biobased Economy and the main (biobased) processes occurring on planet earth</li> <li>- Explain the Biobased Economy in the past and present and give an overview of biomass, conversion technologies and bio-energy/biomaterials</li> <li>- Explain the economic principle of Value versus Volume;</li> <li>- Quantify the food versus fuel dilemma and come up with possible solutions</li> <li>- Quantify the nutrient balance (N-P-K) of a specific crop at a specific location and come up with possible solutions;</li> <li>- Understand the basics of the chemistry of the main components of food and biomass: carbohydrates, proteins and fat</li> </ul> <p>Ad 8+9:</p> <ul style="list-style-type: none"> <li>- See PBL rubric (level 3, achieved).</li> </ul>	
<b>Learning activities and teaching methods</b>	<b>Method</b>	<b>Study load (hours)</b>
	PBL (Problem Based Learning, 5 cases)	75

	Lectures and private study						57
	Intro Chemistry seminars (4), incl. private study						28
	Practical (biodiesel), incl. preparation						8
	<b>Total</b>						<b>168</b>
<b>Test matrix</b>							
<b>Part</b>	<b>Type of examination</b>	<b>Weighting factor</b>	<b>Bottom grade</b>	<b>Rating scale</b>	<b>Individual/ Group work</b>	<b>Time of examination (duration)</b>	<b>Resit</b>
Written test Biobased Economy - Lectures - PBL cases	WRT	4	4.0	1-10	IND	Wk 9 (2 hrs)	Next term
Written test Chemistry	WRT	1	4.0	1-10	IND	Wk 9 (2 hrs)	Next term
PBL + attendance	ASSI	0	pass	pass/fail	IND	Wk 1-8	Next year
<b>Study materials</b>							
<b>Title</b>	<b>Author</b>	<b>Status</b>	<b>Type</b>	<b>Code/comment</b>			
Various articles	-	Required	Via Blackboard	Updated each year			
Study Manual Biobased Economy	Eerten-Jansen, Steeg	Required	Via BlackBoard	Updated each year			
The Biobased Economy	Langeveld et al.	Recommended	Book	€40			
<b>Estimated cost</b>							
<b>Cost item</b>	<b>Approximate cost in €</b>			<b>Comments</b>			
Book	€40			The book is recommended, not required			
Group Excursion (by bus)	€20						
<b>Remarks</b>	Written test chemistry was part of the written test, is now a separate test.						

Course information system		Year of study: 2017-2018 Version: draft 5-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF1412	
<b>Course unit title</b>	Crop Production Systems	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Roger Watts (WaR)	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	6	
<b>Moment of delivery</b>	Year 1	Term 1
<b>Prerequisites</b>	None	
<b>Application deadline</b>	1-5-2017	
<b>Content</b>	<p>Global crop production is a broad and diverse look at the requirements for crop production and the impact of the region and the demographics on how this impacts crop production. The module will look at how we look at cropping systems and how the agro ecology plays an important role on the decisions for producers and how this impact the types of crops that can be grown.</p> <p>This module also includes introduction to business economics which looks at how to interpret and develop basic financial documents. The module will give practical knowledge of how a business can determine its overall financial position and look at the impact of business decisions on the financial sustainability of a business.</p>	
<b>Learning outcomes</b>	<p>This module contributes to the following IFA qualifications:</p> <p>3. Contributing to sustainable innovation in a sector (crop production)</p> <p>4. Contributing to international business development</p> <p><i>After successful completion, the student is able to:</i></p> <p>Ad 3:</p> <ul style="list-style-type: none"> <li>- explain differences present in systems of agricultural production</li> <li>- explain the role of soil in sustainable crop production.</li> <li>- identify the key events that played a role development of modern agricultural practices and its impact on sustainability.</li> <li>- explain importance of agro-ecology on crop production and sustainability</li> <li>- describe the production challenges in developed and developing nations</li> <li>- illustrate the factors that determine different practices that form crop production systems.</li> <li>- describe the role of greenhouse production of crops</li> </ul> <p>Ad 4:</p> <ul style="list-style-type: none"> <li>- Read and interpret the basics of a SME administration <ul style="list-style-type: none"> <li>o read a balance sheet</li> <li>o read a profit and loss account, and cashflow statement</li> <li>o explain how a cost calculation is built up</li> </ul> </li> <li>- Make simple calculations on investment decisions <ul style="list-style-type: none"> <li>o make break even calculation</li> <li>o calculate payback period</li> </ul> </li> </ul>	

Learning activities and teaching methods	Method		Study load (hours)				
	Theory on crop productions systems is provided in weekly instruction lectures, including private study.		56				
	Lab practical		20				
	Project Crop		36				
	Lectures and private study Business Economics, including assignment business		56				
	<b>Total</b>		<b>168</b>				
Test matrix							
Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
Written test Crop production systems	WRT	5	4.0	1-10	IND	Wk 9 (2 hrs)	Next term
Written test Business economics	WRT	3	5.5	1-10	IND	Wk 10 (2 hrs)	Next term
Project Crop (presentation and participation)	PROJ	2	4.0	1-10	GRP	Wk 10	tbd
Assignment Business assignment (Presentation and participation)	ASSI	0	pass	pass/fail	GRP	Wk 10	tbd
Practical (worksheet and participation)	PRAC	0	pass	pass/fail	GRP	Wk 10	Next year
Study materials							
Title	Author	Status	Type	Code/comment			
Study Manual (Crop Production Systems)	Watts, R	required	Via Blackboard	Updated each year			
Introduction Crop Production Systems	Vugt, D. van	required	Reader Available in bookstore	Updated each year			
Introduction in Accounting	Muijlwijk, T. van	required	Reader Available in bookstore	Updated each year			
Practical Manual: Crop Production Systems	Watts, R.	required	Reader Available in bookstore	Updated each year			
Estimated cost							
Cost item	Approximate cost in €		Comments				
Literature/books	€21		For 3 readers				
Remarks	Code for Crop Project changed from ASSI to PROJ						

Course information system		Year of study: 2017-2018 Version: draft 5-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF1413	
<b>Course unit title</b>	Animal Production System	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Gerben Hofstra (HoG)	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	6	
<b>Moment of delivery</b>	Year 1	Term 2
<b>Prerequisites</b>	None	
<b>Application deadline</b>	1-5-2017	
<b>Content</b>	<p>This module covers animal (Life cycle analysis, health, feed), farm, and the sectors on dairy cows, pigs, poultry and dairy goats. These animals and sectors are looked at in an international setting and comparison. Next to lectures, a number of PBL cases are handled. Also two excursions will be organised in which different farms are visited; dairy cow, pig and goat farm.</p> <p>In addition, the basics of Excel are taught by means of classes, an online course, and/or Q&amp;A sessions.</p>	
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <ol style="list-style-type: none"> <li>2. Applying bio-based &amp; circular economy principles in agri-food systems</li> <li>3. Contributing to sustainable innovation in a sector (animal production)</li> <li>4. Contributing to international business development (Excel)</li> <li>8. Project management (PBL)</li> <li>9. Doing Research (PBL)</li> </ol> <p><i>After successful completion, the student is able to:</i></p> <p>Ad 2:</p> <ul style="list-style-type: none"> <li>○ explain the principle of agro-ecology applied in animal production systems and feed production</li> </ul> <p>Ad 3:</p> <ul style="list-style-type: none"> <li>• describe the animal production systems in some given countries</li> <li>• relate generic farm lay-out, production life cycle and production data</li> <li>– describe the main nutritional requirements for dairy cow, pigs, dairy goats and poultry</li> <li>– restate the main relevant aspects of animal health and diseases</li> <li>– describe in broad terms the reproduction cycle of farm animals</li> <li>– describe the sustainability issues at animal husbandry across the world</li> </ul> <p>Ad 4:</p> <ul style="list-style-type: none"> <li>○ perform basic operations in Excel, such as working with cells and sheets, making use of formula's and functions, processing and visualising data</li> </ul> <p>Ad 8+9:</p> <ul style="list-style-type: none"> <li>– See PBL rubric (level 2, in process).</li> </ul>	
	<b>Method</b>	<b>Study load (hours)</b>



<b>Learning activities and teaching methods</b>	Lectures		15				
	Private study		50				
	PBL (Problem Based Learning, 5 cases)		75				
	Excel lectures and self-study		14				
	Excursions		14				
	<b>Total</b>		<b>168</b>				
<b>Test matrix</b>							
<b>Part</b>	<b>Type of examination</b>	<b>Weighting factor</b>	<b>Bottom grade</b>	<b>Rating scale</b>	<b>Individual/ Group work</b>	<b>Time of examination (duration)</b>	<b>Resit</b>
Written test Animal	WRT	9	5.5	1-10	IND	Wk 9 (2 hrs)	Next term
Written test Excel	WRT	1	5.5	1-10	IND	Wk 10 (2 hrs)	Next term
PBL + Excursions	ASSI	0	pass	pass/fail	IND	Wk 1-8	Next term
<b>Study materials</b>							
<b>Title</b>	<b>Author</b>	<b>Status</b>	<b>Type</b>	<b>Code/comments</b>			
Study Manual, 1718		required	Via Blackboard	Updated each year			
Readers Cows, Pigs, Poultry (to be decided)	Jacobs, P. et al.	required	Reader				
Lecture hand-outs, additional literature and articles.	various		Via BlackBoard	Indicated per year			
<b>Estimated cost</b>							
<b>Cost item</b>	<b>Approximate cost in €</b>		<b>Comments</b>				
Literature/books	€ 20						
Group Excursion (by bus)	€ 30		Paid through lump sum year 1				
<b>Remarks</b>	Compared to last year the lectures and the reader will be more international orientated and high input and low input animal production systems around the world are compared.						

Course information system		Year of study: 2017-2018 Version: draft 5-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF1414 and IF1415	
<b>Course unit title</b>	Work Experience Placement (WEP)	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Neeltje Bekkers (BeN)	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	12 (IF1414 6 ECTS / IF1415 6 ECTS)	
<b>Moment of delivery</b>	Year 1                      Term 4	
<b>Prerequisites</b>	None	
<b>Application deadline</b>	1-11-2017	
<b>Content</b>	<p>During this module, the student will gain practical work experience in a company or organisation in the agri-food sector. The placement takes place on a full-time basis, on the company's premises. Students may choose to do either 1 placement of 8 weeks, or 2 placements of 4 weeks. The placement can take place either in the Netherlands or abroad.</p>	
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <ol style="list-style-type: none"> <li>1. Improving sustainability of the Global Agri-food system</li> <li>3. Contributing to sustainable innovation in a sector (animal production, crop production or food processing/nutrition)</li> <li>4. Contributing to international business development</li> <li>6. Networking &amp; influencing</li> <li>7. (Self)-reflection and judgement</li> <li>8. Project management</li> </ol> <p><i>After successful completion, the student is able to:</i></p> <p>Ad 1:</p> <ul style="list-style-type: none"> <li>• map the supply chain of the company or the position of the organisation within the agri-food system they are working for, including the main stakeholders</li> </ul> <p>Ad 3:</p> <ul style="list-style-type: none"> <li>- describe the daily operations of a company/organisation in the agri-food sector (animal, crop and/or food)</li> </ul> <p>Ad 4:</p> <ul style="list-style-type: none"> <li>- read and interpret the basics of a SME administration</li> <li>• make a budget for an existing SME</li> </ul> <p>Ad 6:</p> <ul style="list-style-type: none"> <li>• find a suitable work experience placement post</li> </ul> <p>Ad 7:</p> <ul style="list-style-type: none"> <li>- formulate and reflect on personal learning objectives</li> <li>○ reflect on (learning) experiences</li> </ul> <p>Ad 8:</p> <ul style="list-style-type: none"> <li>• write a well-structured internship report</li> </ul>	
<b>Learning activities and teaching methods</b>	<b>Method</b>	<b>Study load (hours)</b>
	Preparation lectures	2
	Execution of work placement experience(s) 8 weeks, 36h/week	288
	Report writing	40
	Assessment day	6
	<b>Total</b>	<b>336</b>
<b>Test matrix</b>		

Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
<b>IF1414 WEP</b>	ASSI	1	5.5		IND		
- Report		80%	5.5	1-10		Wk 5	Wk 10
- Process		20%	5.5	1-10		Wk 10	Next year
- Presentation		0%	pass	pass/fail		Wk 10	Wk 10
- Company Assessment		0%	5.5	1-10		Wk 5	Next year
<b>IF1415 WEP</b>	ASSI	1	5.5		IND		
- Report		80%	5.5	1-10		Wk 9	Wk 10
- Process		20%	5.5	1-10		Wk 10	Next year
- Presentation		0%	pass	pass/fail		Wk 10	Wk 10
- Company Assessment		0%	5.5	1-10		Wk 9	Next year
<b>Study materials</b>							
Title	Author	Status	Type	Code/comments			
A Writer's Reference	Diana Hacker & Nancy Sommers (8 <sup>th</sup> edition)	Required	Book	ISBN 13:978-1-4576-6676-6			
Study Manual	Bekkers, N., Lieshout, E. van	Required	Via Blackboard	Updated each year			
<b>Estimated cost</b>							
Cost item	Approximate cost in €			Comments			
Literature/books	€ 60			Book is used throughout the programme, purchased already for earlier modules.			
Other travel	By own/public transportation			Costs depending on where work experience placement takes place			
<b>Remarks</b>							

Course information system		Year of study: 2017-2018 Version: draft 6-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF1416	
<b>Course unit title</b>	Coaching & Skills 1	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Janine Jalving (JaJa)	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	3	
<b>Moment of delivery</b>	Year 1                      Term 1	
<b>Prerequisites</b>	None	
<b>Application deadline</b>	1-5-2017	
<b>Content</b>	<p>The main goal of the module Coaching &amp; Skills 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 module offers opportunities to reflect on personality, behaviour, and attitude. It supplies students with tools for change and improvement and offers them guidelines for reaching personal objectives and explore their talents and ambitions.</p> <p>Moreover, the Coaching &amp; Skills modules stimulate students to improve their language and communication skills in English, as well as their intercultural sensibility.</p> <p>In term 1, the focus lies on information &amp; research skills, and meeting skills. Much attention is paid to Problem Based Learning as a method to analyze challenges and find creative solutions. Moreover, students participate in an intensive introduction week, including a trip to the Wadden island Texel.</p>	
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <ol style="list-style-type: none"> <li>6. Networking &amp; influencing</li> <li>7. (Self)-reflection and judgement</li> <li>8. Project management</li> <li>9. Doing research</li> </ol> <p><i>After successful completion, the student is able to:</i></p> <p>Ad 6:</p> <ul style="list-style-type: none"> <li>- participate in teambuilding activities <ul style="list-style-type: none"> <li>o connect with co-students effectively</li> </ul> </li> </ul> <p>Ad 7:</p> <ul style="list-style-type: none"> <li>- formulate a personal development plan <ul style="list-style-type: none"> <li>o understand the purpose of a personal development plan</li> </ul> </li> <li>- give and receive feedback, and judge external information leading to the formation of an opinion</li> <li>- reflect on team activities in a multicultural setting</li> </ul> <p>Ad 8:</p> <ul style="list-style-type: none"> <li>- contribute to a successful meeting in English <ul style="list-style-type: none"> <li>o participate in and chair a meeting</li> <li>o set-up an agenda for a meeting</li> <li>o write meaningful minutes</li> <li>o use appropriate English vocabulary in meetings</li> </ul> </li> <li>- write a structured report <ul style="list-style-type: none"> <li>o produce text structures in their own writing (e.g. in groups)</li> </ul> </li> </ul> <p>Ad 9:</p> <ul style="list-style-type: none"> <li>- gather secondary data</li> </ul>	

	<ul style="list-style-type: none"> <li>○ search for literature in the (HAS) library, GreenI, and online</li> <li>– assess secondary data</li> <li>○ judge quality of data sources (secondary)</li> <li>– interpret secondary data</li> <li>○ analyse texts by means of structures and signposting language in texts</li> <li>– set up a simple research report for an identified problem in a guided setting</li> <li>○ describe the elements and structure a (research) report</li> <li>○ use APA-style in referencing, including citing &amp; referencing</li> </ul>						
<b>Learning activities and teaching methods</b>	<b>Method</b>	<b>Study load (hours)</b>					
	Language of Meetings (2 workshops & assignments)	12					
	Information Skills 1 (lectures, workshops, assignments) and Report writing	28					
	2-day introduction program	16					
	3-day excursion Texel	24					
	2 coach consultations & personal development plan (PDP)	4					
	<b>Total</b>	<b>84</b>					
<b>Test matrix</b>							
<b>Part</b>	<b>Type of examination</b>	<b>Weighting factor</b>	<b>Bottom grade</b>	<b>Rating scale</b>	<b>Individual/ Group work</b>	<b>Time of examination (duration)</b>	<b>Resit**</b>
Coaching	ASSI	0	pass	pass/fail	IND	Wk 1-10	tbd
Language of Meetings	ASSI	0	pass	pass/fail	IND	Wk 1-10	tbd
Information Skills	ASSI	0	pass	pass/fail	IND	Wk 1-10	tbd
** The retake options depend on the reason(s) for failing the assignments. 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 staff members involved.							
<b>Study materials</b>							
<b>Title</b>	<b>Author</b>	<b>Status</b>	<b>Type</b>	<b>Code/comment</b>			
Study Manual (Coaching & Skills IF1)	Various	Required	Via BlackBoard	Updated each year			
A Writer's Reference (8th edition)	Hacker & Sommers	Required	Book				
Quality E-E dictionary		Recommended	Digital				
<b>Estimated cost</b>							
<b>Cost item</b>	<b>Approximate cost in €</b>			<b>Comments</b>			
Literature/books	€70 (A Writer's reference)			The student will use this reference book throughout the study programme.			
	€10 (Reader)						
Excursion Texel	€180						
<b>Remarks</b>							

Course information system		Year of study: 2017-2018 Version: draft 5-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF1417	
<b>Course unit title</b>	Coaching & Skills 2	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Janine Jalving (JaJa)	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	3	
<b>Moment of delivery</b>	Year 1                      Term 2	
<b>Prerequisites</b>	None	
<b>Application deadline</b>	1-5-2017	
<b>Content</b>	<p>The main goal of the module Coaching &amp; Skills 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 module offers opportunities to reflect on personality, behaviour, and attitude. It supplies students with tools for change and improvement and offers them guidelines for reaching personal objectives and explore their talents and ambitions.</p> <p>Moreover, the Coaching &amp; Skills modules stimulate students to improve their language and communication skills in English, as well as their intercultural sensibility.</p> <p>In term 2 each student fills out the Buckingham Strengths Finder and draws up personal learning aims for the first study year based on the outcomes.</p> <p>Students are challenged to extend their intercultural awareness, and to understand how intercultural differences affects doing business in an international environment.</p> <p>Students also learn how to give proper (poster) presentations in English.</p>	
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <p>5. Providing Advice 7. (Self)-reflection and judgement</p> <p><i>After successful completion, the student is able to:</i></p> <p>Ad 5:</p> <ul style="list-style-type: none"> <li>- give a professional presentation in English <ul style="list-style-type: none"> <li>o structure a presentation</li> <li>o use (visual) aids to create an impactful presentation</li> <li>o use appropriate English vocabulary in presentations</li> </ul> </li> <li>- indicate differences between cultures and how this affects communication in and between cultures in an international agri-food context <ul style="list-style-type: none"> <li>o apply theoretical knowledge on intercultural communication and business cultures in analysing a certain (business) culture</li> </ul> </li> </ul> <p>Ad 7:</p> <ul style="list-style-type: none"> <li>- formulate a personal development plan <ul style="list-style-type: none"> <li>o draw up personal learning aims for the first study year based on the outcomes of the Strengths Finder</li> </ul> </li> <li>- give and receive feedback, and judge external information leading to the formation of an opinion</li> </ul>	
	<b>Method</b>	<b>Study load (hours)</b>

<b>Learning activities and teaching methods</b>	Language of Presentations (workshops & assignments)		28				
	Intercultural Business Communication (workshops & project assignment)		28				
	Talent-Based & Strengths Finder Test (workshops & assignments)		25				
	1 coach consultation (incl. domain/ job orientation assignment)		3				
	<b>Total</b>		<b>84</b>				
<b>Test matrix</b>							
<b>Part</b>	<b>Type of examination</b>	<b>Weighting factor</b>	<b>Bottom grade</b>	<b>Rating scale</b>	<b>Individual/ Group work</b>	<b>Time of examination (duration)</b>	<b>Resit</b>
Coaching	ASSI	0	pass	pass/ fail	IND	continuous	Next term
Language of Presentations	PRES	1	5.5	0-10	IND	Wk 7-10	Next term
Intercultural Business Communication	ASSI	1	5.5	0-10	GRP	Wk 7-10	Next term
<b>Study materials</b>							
<b>Title</b>	<b>Author</b>	<b>Status</b>	<b>Type</b>	<b>Code/comment</b>			
Study Manual (Coaching & Skills IF1)	Various	Required	Via BlackBoard	Updated each year			
A Writer's Reference (8th edition)	Hacker & Sommers	Required	Book	Already in possession			
Cultures and Organisations – software of the mind	G.J. Hofstede, G. Hofstede & M. Minkov	Required	Book	3rd revised version			
Strengths Finder 2.0	Tom Rath	Required	Book+code				
<b>Estimated cost</b>							
<b>Cost item</b>	<b>Approximate cost in €</b>		<b>Comments</b>				
Literature/books	€10 (reader) €35 (Hofstede) €20 (Rath)						
<b>Remarks</b>							

Course information system		Year of study: 2017-2018 Version: draft 5-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF1418	
<b>Course unit title</b>	Coaching & Skills 3	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Janine Jalving (JaJa)	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	3	
<b>Moment of delivery</b>	Year 1                      Term 3	
<b>Prerequisites</b>	None	
<b>Application deadline</b>	1-11-2017	
<b>Content</b>	<p>The main goal of the module Coaching &amp; Skills 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 module offers opportunities to reflect on personality, behaviour, and attitude. It supplies students with tools for change and improvement and offers them guidelines for reaching personal objectives and explore their talents and ambitions.</p> <p>Moreover, the Coaching &amp; Skills modules stimulate students to improve their language and communication skills in English, as well as their intercultural sensibility.</p> <p>In term 3, students focus on their applied writing skills and learn how to write essays. The focus lies again on information skills. However, this term these skills are more applied to the use of scientific papers and creating an infographic.</p>	
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <p>7. (Self)-reflection and judgement 8. Project management 9. Doing research</p> <p><i>After successful completion, the student is able to:</i></p> <p>Ad 7:</p> <ul style="list-style-type: none"> <li>- formulate a personal development plan (coaching) <ul style="list-style-type: none"> <li>o identify personal skills and strengths (colour) ('Who am I?')</li> </ul> </li> <li>- give and receive feedback, and judge external information leading to the formation of an opinion</li> </ul> <p>Ad 8:</p> <ul style="list-style-type: none"> <li>- write a structured report <ul style="list-style-type: none"> <li>o write a clear text with the use of appropriate English vocabulary</li> <li>o set-up various report structures for different purposes and with appropriate elements (research report, project/assignment report, advisory report)</li> </ul> </li> </ul> <p>Ad 9:</p> <ul style="list-style-type: none"> <li>- interpret secondary data (ad 9) <ul style="list-style-type: none"> <li>o visualise the main points from a scientific paper</li> </ul> </li> </ul>	
<b>Learning activities and teaching methods</b>	<b>Method</b>	<b>Study load (hours)</b>
	Writing Skills, Report writing (workshops & assignments)	30



	Information Skills 2 (lectures, workshops, assignments)						30
	1 coach consultation (domain/ job orientation, find work-place experience)						24
	<b>Total</b>						<b>84</b>
<b>Test matrix</b>							
<b>Part</b>	<b>Type of examination</b>	<b>Weighting factor</b>	<b>Bottom grade</b>	<b>Rating scale</b>	<b>Individual/ Group work</b>	<b>Time of examination (duration)</b>	<b>Resit</b>
Coaching	ASSI	0	pass	pass/ fail	IND	continuous	Next term
Writing skills	ASSI	1	5.5	0-10	IND	Wk 7 - 10	Next term
Information Skills	ASSI	0	pass	pass/ fail	IND	Wk 1-10	Next term
<b>Study materials</b>							
<b>Title</b>	<b>Author</b>	<b>Status</b>	<b>Type</b>	<b>Code/comment</b>			
Study Manual (Coaching & Skills IF1)	Various	Required	Via BlackBoard	Updated each year			
A Writer's Reference (8th edition)	Hacker & Sommers	Required	Book	Already in possession			
<b>Estimated cost</b>							
<b>Cost item</b>	<b>Approximate cost in €</b>	<b>Comments</b>					
Literature/books		Already in possession					
<b>Remarks</b>							

Course information system		Year of study: 2017-2018 Version: draft 5-2017					
<b>Study Programme</b>	International Food and Agribusiness						
<b>Course unit code</b>	IF1419						
<b>Course unit title</b>	Coaching & Skills 4						
<b>Location</b>	Den Bosch						
<b>Coordinator</b>	Janine Jalving (JaJa)						
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory						
<b>Language of instruction</b>	English						
<b>Credits (ECTS)</b>	3						
<b>Moment of delivery</b>	Year 1                      Term 4						
<b>Prerequisites</b>	None						
<b>Application deadline</b>	1-11-2017						
<b>Content</b>	<p>The main goal of the module Coaching &amp; Skills 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 module offers opportunities to reflect on personality, behaviour, attitude, etc. It supplies students with tools for change and improvement and offers them guidelines for reaching personal objectives. Within the Coaching students work on their personal objectives and further explore their talents and ambitions.</p> <p>In term 4 the students are doing their orientation internships, and no lectures are scheduled this term. However, in this internship period students continue working on developing their personal learning aims, as drawn up in their personal development plan and discussed with their coach at the start of year 1 (term 2). They are also offered the opportunity to further develop their talents and explore their opportunities by means of self-management activities. At the end of term 4 the students reflect on their personal development over the past year. They write a self-reflection report, which they discuss with their coach in the final consultation. The coach assesses the student's self-management activities undertaken in year 1.</p>						
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <p>7. (Self)-reflection and judgement</p> <p><i>After successful completion, the student is able to:</i></p> <p>Ad 7:</p> <ul style="list-style-type: none"> <li>- Formulate a personal development plan (coaching) <ul style="list-style-type: none"> <li>o write a reflection report on year 1</li> </ul> </li> </ul>						
<b>Learning activities and teaching methods</b>	<b>Method</b>					<b>Study load (hours)</b>	
	Self-management activities year 1					40	
	Coaching (1 consultation); domain/ job orientation; self-reflection report; internship activities					44	
	<b>Total</b>					<b>84</b>	
<b>Test matrix</b>							
<b>Part</b>	<b>Type of examination</b>	<b>Weighting factor</b>	<b>Bottom grade</b>	<b>Rating scale</b>	<b>Individual/ Group work</b>	<b>Time of examination (duration)</b>	<b>Resit</b>

Coaching (incl. self-reflection report)	ASSI	0	pass	pass/fail	IND	Wk 10	Wk 11
Self-management	ASSI	0	pass	pass/fail	IND	Wk 10	Next term
<b>Study materials</b>							
<b>Title</b>	<b>Author</b>	<b>Status</b>		<b>Type</b>	<b>Code/comment</b>		
Study Manual (Coaching & Skills IF1)	Various	Required		Via BlackBoard	Updated each year		
<b>Estimated cost</b>							
<b>Cost item</b>	<b>Approximate cost in €</b>			<b>Comments</b>			
Literature/books	-			-			
<b>Remarks</b>							

## YEAR 2

Course information system		Year of study: 2017-2018 Version: draft 5-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF2409	
<b>Course unit title</b>	Extension on Sustainability	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Jeannette van de Steeg (SteJ)	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	8	
<b>Moment of delivery</b>	Year 2                      Term 4	
<b>Prerequisites</b>	Coaching & skills (IF1416-1419, IF2431-2433), practical experience in a agri-food environment (f.i. by means of IF1414 and IF1415 Work Experience Placements)	
<b>Application deadline</b>	1-11-2017	
<b>Content</b>	<p>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.</p> <p>The lectures are on Sustainable Engineering; how to calculate footprint? Four footprints are discussed; CO<sub>2</sub>, N, P, water. In workshops, several aspects of consultative selling are covered.</p>	
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <p>2. Applying bio-based &amp; circular economy principles in agri-food systems</p> <p>5. Providing advice</p> <p>8. Project management</p> <p><i>After successful completion, the student is able to:</i></p> <p>Ad 2:</p> <ul style="list-style-type: none"> <li>- quantify the environmental impact of simple agri-food systems <ul style="list-style-type: none"> <li>o calculate a simple carbon, nitrogen, water or land use footprint of agri-food products or processes</li> <li>o discuss the environmental impact of human intervention in relation to carbon and nitrogen cycles, fresh water use and land use change</li> <li>o discuss the possibilities for a company to decrease its calculated footprint</li> </ul> </li> </ul> <p>Ad 5:</p> <ul style="list-style-type: none"> <li>- apply basic advisory skills, throughout a brief and controlled advisory process commissioned by an external client <ul style="list-style-type: none"> <li>o relate theory on advisory skills to own performance</li> <li>o lead a conversation/advisory discussion efficiently</li> <li>o clarify the assignment in consultation with the client, using proper questioning</li> <li>o act with respect to the interests and values of the client</li> </ul> </li> </ul>	

	<ul style="list-style-type: none"> <li>o formulate a project proposal in alignment with the client</li> <li>o write an advisory report with findings, proper conclusions and a first step towards an advice</li> </ul> <p>Ad 8:</p> <ul style="list-style-type: none"> <li>- compose a project plan for a real-life assignment (including planning/budgeting/risk assessment) <ul style="list-style-type: none"> <li>o draw up and work with a project plan</li> </ul> </li> <li>o execute a real life, well guided, project according to a project plan and together with peers</li> <li>- act as a project leader (name, oversee and divide tasks, and coordinate the process) (or within another Y2 module)</li> </ul>						
<b>Learning activities and teaching methods</b>	<b>Method</b>					<b>Study load (hours)</b>	
	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	
<b>Total</b>					<b>224</b>		
<b>Test matrix</b>							
<b>Part</b>	<b>Type of examination</b>	<b>Weighting factor</b>	<b>Bottom grade</b>	<b>Rating scale</b>	<b>Individual/ Group work</b>	<b>Time of examination (duration)</b>	<b>Resit</b>
Written test Sustainable Engineering	WRT	1	4.0	1-10	IND	Wk 9 (2 hrs)	Next term
Oral exam Communication	ORAL	1	4.0	1-10	IND	Wk 10	Wk 11
Project	PROJ	1	4.0	1-10	GRP	Wk 10	Next year
Attendance/Attitude	ASSI	0	pass	pass/fail	IND	Wk 9	Next year
<b>Study materials</b>							
<b>Title</b>	<b>Author</b>	<b>Status</b>	<b>Type</b>	<b>Code/comment</b>			
Study Manual	Various	Required	Via Blackboard	Updated each year			
Reader Sustainable Engineering	M. van Eerten	Required	Reader	Via Hurkmans			
How to Do Research	Grit, R. and Julsing, M.	Required	Book, website, templates	ISBN9789001861230. Already in possession (yr 2)			
Project Management	Grit, R.	Required	Book, website, templates	ISBN9789001790929. Already in possession (yr 1)			
Strengths Finder 2.0	Rath, T.	Required	Book + code	Already in possession			
Lecture hand-outs, add. literature, articles.	Various		Via BlackBoard	Indicated per year			
<b>Estimated cost</b>							
<b>Cost item</b>	<b>Approximate cost in €</b>			<b>Comments</b>			
Literature/books	€20 (reader)						
Other travel	€75			Cost for own transportation is depending on where client is located.			
<b>Remarks</b>	-						

Course information system		Year of study: 2017-2018 Version: draft 5-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF2416	
<b>Course unit title</b>	Supply Chain Management (SCM)	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Marnix Wolters (WoMa)	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	6	
<b>Moment of delivery</b>	Year 1                      Term 1	
<b>Prerequisites</b>	IF1401, IF1402	
<b>Application deadline</b>	1-5-2017	
<b>Content</b>	<p>This module covers the following topics:</p> <ul style="list-style-type: none"> <li>- Procurement logistics</li> <li>- Quality management systems and auditing</li> <li>- Processing logistics</li> <li>- Warehousing and distribution logistics</li> <li>- Reverse logistics</li> <li>- Sustainability</li> <li>- Statistics</li> </ul> <p>Lectures cover the theory of SCM and are illustrated by guest lectures and excursions, and applied during tutorials. In addition, instruction lectures on statistics are given. The module is assessed by means of two written tests, one on the theory of SCM, one on statistics, as well as a series of individual assignments.</p>	
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <ol style="list-style-type: none"> <li>1. Improving sustainability of the Global Agri-food system</li> <li>4. Contributing to international business development</li> <li>7. (Self)-reflection and judgement</li> </ol> <p><i>After successful completion, the student is able to:</i></p> <p>Ad 1:</p> <ul style="list-style-type: none"> <li>- analyse a supply chain on sustainability aspects <ul style="list-style-type: none"> <li>o define the main aspects of sustainability in supply chain management</li> <li>o relate sustainability aspects to a particular supply chain</li> </ul> </li> </ul> <p>Ad 4:</p> <ul style="list-style-type: none"> <li>- implement logistical principles and concepts in agri-food chains <ul style="list-style-type: none"> <li>o explain main logistical principles and concepts in agri-food chains</li> <li>o calculate the financial and operational impact of logistical processes and decisions</li> <li>o apply descriptive statistics, normal distribution and sample taking in a supply chain setting</li> </ul> </li> <li>- understand international trade agreements and trade documentation <ul style="list-style-type: none"> <li>o explain international trade agreements in relation to ownership and risk management (INCO terms, insurances, MRP)</li> <li>o give examples of necessary trade documentation</li> <li>o draft simple product specifications</li> </ul> </li> <li>- explain the rationale behind quality management systems <ul style="list-style-type: none"> <li>o give examples of quality management systems and their purpose</li> </ul> </li> </ul>	

	<ul style="list-style-type: none"> <li>o draft a basic HACCP plan</li> <li>o execute and interpret the outcomes of a supplier audit</li> <li>o analyse risks and responsibilities for all stakeholders in international supply chains</li> </ul> <p>Ad 7:</p> <ul style="list-style-type: none"> <li>o give and receive constructive feedback to and from peers</li> </ul>						
<b>Learning activities and teaching methods</b>	<b>Method</b>						<b>Study load (hours)</b>
	Theory is provided in weekly instruction lectures. Context is provided by guest lectures by professionals.						40
	Private study						100
	For the assignments and further application of the theory, tutorials are scheduled.						15
	Exam and evaluation						3
	Excursion						12
	<b>Total</b>						<b>168</b>
<b>Test matrix</b>							
<b>Part</b>	<b>Type of examination</b>	<b>Weighting factor</b>	<b>Bottom grade</b>	<b>Rating scale</b>	<b>Individual/ Group work</b>	<b>Time of examination (duration)</b>	<b>Resit</b>
Written exam on the theory of SCM	WRT	9	4.0	1-10	IND	Wk 9 (2 hrs)	Next term
Written exam on statistics	WRT	5	5.5	1-10	IND	Wk 10 (2 hrs)	Next term
Assignments	ASSI	6	4.0	1-10	IND	Wk 8	tbd
Attendance/participation	ASSI	0	pass	pass/fail	IND	Wk 8	tbd
<b>Study materials</b>							
<b>Title</b>	<b>Author</b>	<b>Status</b>	<b>Type</b>	<b>Code/comment</b>			
Study Manual Supply Chain Management	M. Wolters	Required	Via Blackboard	Updated each year			
Purchasing and Supply Chain Management, A sustainability perspective	Johnsen, T., Howard, M. & Miemczyck, J.	Required					
Statistics for International Food and Agribusiness	Almalik, O. & Gerritse, G.	Required	Via BlackBoard				
Lecture hand-outs, add. literature and articles	Various	Required or Recommended	Via BlackBoard	Indicated per year			
<b>Estimated cost</b>							
<b>Cost item</b>	<b>Approximate cost in €</b>			<b>Comments</b>			
Literature/books	€50						
Group Excursion (by bus)	€20						
Other travel (one company visit)	€15			Based on public transportation, depends on location of company of your own choice			
<b>Remarks</b>							

Course information system		Year of study: 2017-2018 Version: draft 6-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF2417	
<b>Course unit title</b>	Business & Marketing	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Hielke van der Meulen (MeHi)	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	5	
<b>Moment of delivery</b>	Year 2                      Term 2	
<b>Prerequisites</b>	None	
<b>Application deadline</b>	1-5-2017	
<b>Content</b>	<p>This module covers:</p> <ul style="list-style-type: none"> <li>- Small &amp; Medium Enterprises (SMEs) analysis</li> <li>- Strategic Marketing: buying behaviour, research, planning</li> </ul>	
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <p>4. Contributing to international business development</p> <p>5. Providing advice</p> <p><i>After successful completion, the student is able to:</i></p> <p>Ad 4</p> <ul style="list-style-type: none"> <li>- recognize and apply theory on strategic marketing, marketing planning, and buying behaviour <ul style="list-style-type: none"> <li>o use relevant models</li> <li>o analyse a company in its marketing environment</li> <li>o use a SWOT analysis, including a confrontation matrix</li> <li>o apply the marketing theory to a given case</li> </ul> </li> <li>- reproduce the basics of setting up a simple market survey <ul style="list-style-type: none"> <li>o explain the basics of market and marketing research</li> <li>o distinguish a good from a poor survey question</li> </ul> </li> <li>- explain the basics of general and SME management <ul style="list-style-type: none"> <li>o describe the major theories and models in business management</li> <li>o understand the main family business matters</li> <li>o successfully negotiate with a SME for a small assignment</li> <li>o analyse an SME in the agri-food sector, according to a semi-structured format</li> </ul> </li> <li>- understand the role of HRM in a company or organisation</li> </ul> <p>Ad 5</p> <ul style="list-style-type: none"> <li>o formulate an advice for an SME on a marketing assignment</li> </ul>	
<b>Learning activities and teaching methods</b>	<b>Method</b>	<b>Study load (hours)</b>
	Thematic lectures	5
	Working lectures (interactive)	25
	Guest lectures	5
	Company visit	15
	Group project: analysis SME + marketing assignment	60
	Private study / exam	30
<b>Total</b>	<b>140</b>	
<b>Test matrix</b>		



Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
Written exam on SMEs	WRT	3	4.0	1-10	IND	Wk 9 (2 hrs)	Next term
Written exam on Strategic Marketing	WRT	2	5.5	1-10	IND	Wk 9 (2 hrs)	Next term
Project (Report + Presentation)	PROJ	5	4.0	1-10	GRP	Wk 10	tbd
Attendance and excursion(s)	EXCU	0	pass	pass/fail	IND	Wk 1-10	tbd
<b>Study materials</b>							
Title	Author	Status	Type	Code/comment			
Study Manual, 1718	H. van der Meulen	Required	Via Blackboard	Updated each year			
Marketing Fundamentals	B. Verhage	Required	Book	ISBN 978-9001-81866-1			
Organisation & Management; an International Approach	J. Marcus & N. van Dam 2012. Noordhoff (NL)	To be determined	handbook	ISBN 978-9001-80966-9			
Lecture hand-outs, add. literature and articles	various	Required	Via BlackBoard	Indicated per year			
<b>Estimated cost</b>							
Cost item	Approximate cost in €	Comments					
Literature/books	€75  €55	Marketing Fundamentals (also used in the Agri-food Business module, and useful as a handbook the entire IFA programme) Organisation & Management or other					
Group Excursion (by bus)	€15						
Other travel	€20	Small excursion / group work, by own transportation. Based on estimated costs for public transport.					
<b>Remarks</b>							

Course information system		Year of study: 2017-2018 Version: draft 5-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF2418	
<b>Course unit title</b>	Sustainable Trade	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Bram van Helvoirt (HeBr)	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	5	
<b>Moment of delivery</b>	Year 2                      Term 3	
<b>Prerequisites</b>	None	
<b>Application deadline</b>	1-11-2017	
<b>Content</b>	After this module, students understand and are able to analyse the transformation of markets and sustainability. Students learn about the drivers for sustainability, certification systems, international trade, and trade policy.	
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <p>1. Improving sustainability of the Global Agri-food system 4. Contributing to international business development 8. Project management</p> <p><i>After successful completion, the student:</i></p> <p>Ad 1:</p> <ul style="list-style-type: none"> <li>- apply market transformation model to address issues in agri-food chains <ul style="list-style-type: none"> <li>o analyse the key drivers for sustainability in a specific market</li> <li>o discuss the market transformation model including the different phases in a specific sector</li> <li>o explain the concept of social responsibility</li> </ul> </li> <li>- interpret certification in relation to sustainable market development <ul style="list-style-type: none"> <li>o interpret ISO26000 in relation to drivers of sustainability and certification</li> <li>o discuss the concept of certification as a tool for sustainable market development</li> <li>o compare and select appropriate certification schemes</li> </ul> </li> <li>- discuss contradictions in issues related to certification and inclusiveness <ul style="list-style-type: none"> <li>o reflect on power division in supply chains</li> <li>o reflect on inclusion and exclusion in supply chains</li> </ul> </li> </ul> <p>Ad 4:</p> <ul style="list-style-type: none"> <li>- demonstrate a basic understanding of trade policy and instruments <ul style="list-style-type: none"> <li>o understand the current situation, trends &amp; developments in international commodity trade</li> <li>o understand how historical trade relations influence today's trade</li> <li>o explain the basics of trade policy and instruments</li> <li>o explain the basics of trading of futures</li> <li>o explain the impact of global currencies and oil prices</li> <li>o estimate the effects of currency changes</li> </ul> </li> </ul> <p>Ad 8:</p> <ul style="list-style-type: none"> <li>- act as a project leader (name, oversee and divide tasks, and coordinate the process) (or within another Y2 module)</li> <li>- show effective collaboration with fellow students in small groups</li> </ul>	

Learning activities and teaching methods	Method						Study load (hours)
	(Guest) lectures						22
	Project meetings						20
	Exam and evaluation						3
	Self-study, including project work						95
<b>Total</b>						<b>140</b>	
Test matrix							
Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
Written test on Sustainable Trade	WRT	3	5.5	1-10	IND	Wk 9 (2 hrs)	Next term
Attendance project meetings & guest lectures	ASSI	0	pass	pass /fail	IND		Next year
Company project	PROJ	2	5.5		GRP	Wk 10	Next year
- Report		75%	4.0	1-10	GRP	Wk 9	
- Presentation (combined with IF2433)		25%	4.0	1-10	GRP	Wk 9	
Study materials							
Title	Author	Status	Type	Code/comment			
Study Manual	Van Helvoirt, B.	Required	Via Blackboard	Updated every year			
Changing the Food Game (2014)	Simons, L.	Required	Book	ISBN 9781783532308			
Sustainable sourcing of agricultural raw materials. A practitioner's guide (2015)	SAI	Required	Article, via Blackboard	Article URL			
Lecture hand-outs, add. literature and articles	Various	Required	Via BlackBoard	Indicated per year			
Estimated cost							
Cost item	Approximate cost in €	Comments					
Literature/books	€ 35	Book (Simons)					
Other travel	€ 20	Company visits, by own transportation. Based on estimated costs for public transport.					
Remarks							

Course information system		Year of study: 2017-2018 Version: draft 5-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF2421 (2 terms)	
<b>Course unit title</b>	Food Domain Track	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Barbara van Mossevelde (MoB)	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	6	
<b>Moment of delivery</b>	Year 2                      Term 1+2	
<b>Prerequisites</b>	IF1404 Intro Food	
<b>Application deadline</b>	1-5-2017	
<b>Content</b>	<p>In term 1 'Product safety and International Food Safety &amp; Integrity Issues' students learn about food safety and hazards in food production by analysing a processed food product. In addition, they learn about an international food safety or food integrity issue, by building a dossier; collecting and selecting relevant information. Topics covered are:</p> <ul style="list-style-type: none"> <li>• Food product specification</li> <li>• Product (un)safety and hazard analysis</li> <li>• Physical, chemical and microbiological contamination</li> <li>• International food safety organizations</li> <li>• Risk Assessment/Management/Communication</li> <li>• Consumer perception of food safety</li> <li>• Dossier building &amp; Developing a point of view based on collecting and selecting information</li> </ul> <p>In term 2 'Health &amp; Nutrition' students learn about health &amp; nutrition in an international context by developing a food intervention strategy, based on fortification, to reduce a nutrient deficiency in a developing country. This food intervention strategy is presented through an advisory report, research proposal and a presentation.</p> <p>Topics covered are:</p> <ul style="list-style-type: none"> <li>• Nutrients and nutritional values</li> <li>• Food in relation to human health</li> <li>• Food intervention strategies</li> <li>• Fortification</li> </ul>	
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <p>3. Contributing to sustainable innovation in a sector (food processing/nutrition)</p> <p>9. Doing research</p> <p><i>After successful completion, the student is able to:</i></p> <p>Ad 3</p> <ul style="list-style-type: none"> <li>- analyse a food safety or integrity issue at various stakeholder levels: from governments, to food companies as well as consumers <ul style="list-style-type: none"> <li>o explain in general terms, by using categories of measures and giving examples, how hazards in food processing can be prevented</li> <li>o illustrate the impact of unsafe food on global society</li> </ul> </li> <li>- develop a food intervention strategy to improve nutritional status (combat micronutrient deficiency) <ul style="list-style-type: none"> <li>o explore creative/innovative ideas to combat malnutrition in a certain society</li> <li>o illustrate the impact of micronutrient deficiency on global society</li> </ul> </li> </ul>	

	<ul style="list-style-type: none"> <li>○ demonstrate awareness that cultural differences are present between different societies</li> </ul> <p>Ad 9</p> <ul style="list-style-type: none"> <li>- initiate a research question and hypothesis based on a given case</li> <li>- compose a research proposal</li> <li>- apply various research methodologies for collection of (primary)data of acceptable quality <ul style="list-style-type: none"> <li>○ describe relevant research methodologies (experiments)</li> </ul> </li> <li>- indicate elements of a research report</li> </ul>						
<b>Learning activities and teaching methods</b>	<b>Method</b>					<b>Study load (hours)</b>	
	Theory is provided in weekly instruction lectures, incl. private study.					56	
	For the assignment in term 1 and group project in term 2, tutor meetings are scheduled, incl. work on assignment and project					96	
	Practicals + preparation in term 1+2					16	
<b>Total</b>					<b>168</b>		
<b>Test matrix</b>							
<b>Part</b>	<b>Type of examination</b>	<b>Weighting factor</b>	<b>Bottom grade</b>	<b>Rating scale</b>	<b>Individual/ Group work</b>	<b>Time of examination (duration)</b>	<b>Resit</b>
Assignment, attendance, practical (term 1)	ASSI	2	4.0	1-10	IND	Wk 10 T1	Next term
Project (report incl. research proposal + presentation), attendance, practical (term 2)	PROJ	3	4.0	1-10	GRP	Wk 8 T2	Next year
Oral exam (on term 1+2)	ORAL	5	4.0	1-10	IND	Wk 10 T2 (30 min.)	Next term
<b>Study materials</b>							
<b>Title</b>	<b>Author</b>	<b>Status</b>	<b>Type</b>	<b>Code/comment</b>			
Study Manual Food Domain Track	B. van Mossevelde	Required	Via Blackboard	Updated each year			
Introduction to Food Science & Food Systems	R. Parker and M. Pace	Required	Book	ISBN9781435489394 (in possession from yr 1)			
How to Do Research	Grit, R. and Julsing, M.	Required	Book, website, templates	ISBN9789001861230 (used throughout curriculum)			
Project Management	Grit, R.	Required	Book, website, templates	ISBN9789001790929 (in possession from yr 1)			
Lecture hand-outs, add. literature, articles.	various	Required	Via BlackBoard	Indicated per year			
<b>Estimated cost</b>							
<b>Cost item</b>	<b>Approximate cost in €</b>			<b>Comments</b>			
Literature/books	€26			How to do Research/Gritt			
<b>Remarks</b>	Module is reformulated from 3 to 2 terms. Assessment units altered.						

Course information system		Year of study: 2017-2018 Version: draft 5-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF2423 (2 terms)	
<b>Course unit title</b>	Animal Production Domain	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Gerben Hofstra (HoG)	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	6	
<b>Moment of delivery</b>	Year 2                      Term 1+2	
<b>Prerequisites</b>	IF1413 Animal Production Systems	
<b>Application deadline</b>	1-5-2017	
<b>Content</b>	<p>The Animal Production Domain in year 2 focuses on:</p> <ul style="list-style-type: none"> <li>• Term 1: Feed, Forages and Leguminosis, Feed related Diseases. Also, the subject of animal breeding programmes is covered.</li> <li>• Term 2: Housing, Climate, Climate related Diseases. Also, the subject of health programmes is covered.</li> </ul> <p>The main question during the module is: How to improve production sustainable for the chosen animal in a chosen country, outside Europe? Lectures, together with excursions and cases are the input for an individual research on the topics.</p>	
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <p>3. Contributing to sustainable innovation in a sector (animal production) 9. Doing research</p> <p>After successful completion, the student is able to:</p> <p>Ad 3</p> <ul style="list-style-type: none"> <li>- apply information on feed and feed related diseases in an international animal surroundings</li> <li>- apply information on housing, thermo-comfort zone, climate and climate related diseases in an international animal surroundings</li> <li>- apply information on breeding and health programmes in an international animal surroundings</li> <li>- identify possibilities for sustainable intensification and agro-ecological solutions for challenges in the international animal production chains</li> </ul> <p>Ad 9</p> <ul style="list-style-type: none"> <li>- initiate a research question and hypothesis based on a given case</li> <li>- compose a research proposal</li> <li>- apply various research methodologies for collection of (primary) data of acceptable quality <ul style="list-style-type: none"> <li>o describe relevant research methodologies (experiments)</li> </ul> </li> <li>- indicate elements of a research report</li> </ul>	
<b>Learning activities and teaching methods</b>	<b>Method</b>	<b>Study load (hours)</b>
	Lectures (to provide theory, at least six per term) Guest lectures by professionals (to provide context)	28
	Private study	28

	Tutor meetings (by lecturer focused on individual report, appr. 3 per term)	14					
	Assignment(s) and Animal production project (report and presentation)	84					
	Excursions (1 per term)	14					
	<b>Total</b>	<b>168</b>					
<b>Test matrix</b>							
Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
Assignment(s) & attendance	ASSI	2	4.0	1-10	IND	Wk 10 T1, 2	Next year
Project (report incl. research proposal + presentation)	PROJ	3	4.0	1-10	GRP	Wk 10 T2	tbd
Oral exam (on term 1+2)	ORAL	5	4.0	1-10	IND	Wk 10 T2 (30 min.)	Next term
<b>Study materials</b>							
Title	Author	Status	Type	Code/comment			
Study Manual Animal Domain Track	G. Hofstra, E. Bouwmans	Required	Via Blackboard	Updated each year			
How to Do Research	Grit, R. and Julsing, M.	Required	Book, website, templates	ISBN9789001861230 (used throughout curriculum)			
Project Management	Grit, R.	Required	Book, website, templates	ISBN9789001790929 (in possession from yr 1)			
Lecture hand-outs, additional literature and articles	various	required	Via BlackBoard	Indicated per year			
<b>Estimated cost</b>							
Cost item	Approximate cost in €	Comments					
Literature/books	€26	How to do Research/Gritt					
Other travel	€40	Small excursion / group work, by own transportation. Based on estimated costs for public transport.					
<b>Remarks</b>	Module is reformulated from 3 to 2 terms. Assessment units altered. There will be one research report with information about one or two animals in one high input country and one low input country. Thus a comparison can be made. Also the research report should lead to a recommendation for further research; how to improve sustainability for the giving animal in the two countries? The final chapter will be a project proposal for further research.						

Course information system		Year of study: 2017-2018 Version: draft 5-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF2424 (2 terms)	
<b>Course unit title</b>	Crop Production Domain	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Roger Watts (WaR)	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	6	
<b>Moment of delivery</b>	Year 2                      Term 1+2	
<b>Prerequisites</b>	IF1412 Crop Production Systems	
<b>Application deadline</b>	1-5-2017	
<b>Content</b>	<p>This module will give students an introduction to the growth and development of plants in the context of crop production. The material presented looks at how plants develop and the requirements on a macro and micro level to gain greater insights on why crop production methods are developed. The module highlights the steps growers need to follow for successful crop production and the challenges that they must overcome to optimize production.</p> <p>The module will include self-guided learning through individual assignments and group projects to apply the knowledge they are presented during lectures. In addition practicals will give the students first-hand experience with some of the aspects of plant growth and development.</p>	
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <p>3. Contributing to sustainable innovation in a sector (crop production)</p> <p>9. Doing research</p> <p><i>After successful completion, the student is able to:</i></p> <p>Ad 3:</p> <ul style="list-style-type: none"> <li>- illustrate how plant morphology and anatomy impact crop production</li> <li>- demonstrate how plant physiology impacts crop production</li> <li>- illustrate the stages for crop production and their importance to productivity</li> <li>- demonstrate knowledge of pest management requirements for crop production</li> <li>- demonstrate the requirements and characteristics that define organic agricultural production</li> <li>- explain the basics of the methods of plant improvement</li> <li>- compare and contrast agro-ecology and environment on crop productivity</li> </ul> <p>Ad 9</p> <ul style="list-style-type: none"> <li>- initiate a research question and hypothesis based on a given case</li> <li>- compose a research proposal</li> <li>- apply various research methodologies for collection of (primary) data of acceptable quality <ul style="list-style-type: none"> <li>o describe relevant research methodologies (experiments)</li> </ul> </li> <li>- indicate elements of a research report</li> </ul>	
	<b>Method</b>	<b>Study load (hours)</b>



<b>Learning activities and teaching methods</b>	Theory is provided in weekly instruction lectures, plus private study		64				
	Practical (lab)		26				
	Crop Blog Assignment		22				
	Crop Production Project		56				
	<b>Total</b>		<b>168 hrs</b>				
<b>Test matrix</b>							
<b>Part</b>	<b>Type of examination</b>	<b>Weighting factor</b>	<b>Bottom grade</b>	<b>Rating scale</b>	<b>Individual/ Group work</b>	<b>Time of examination (duration)</b>	<b>Resit</b>
Weblog Assignment Practical	ASSI	2	4.0	1-10	IND	Wk 10	Next term
Project (report incl. research proposal + presentation)	PROJ	3	4.0	1-10	GRP	Wk 10	tbd
Written test (on term 1+2)	WRT	5	4.0	1-10	IND	Wk 9 T2 (2 hrs)	Next term
<b>Study materials</b>							
<b>Title</b>	<b>Author</b>	<b>Status</b>	<b>Type</b>	<b>Code/comment</b>			
Study Manual Crop Domain Track	R. Watts	Required	Via Blackboard	Updated each year			
Introduction to Agronomy 2nd edition	Shaeffer, Craig C	Required	Textbook	ISBN 978-1-1113-1233-6			
How to Do Research	Grit, R. and Julsing, M.	Required	Book, website, templates	ISBN9789001861230 (used throughout curriculum)			
Project Management	Grit, R.	Required	Book, website, templates	ISBN9789001790929 (in possession from yr 1)			
Lecture hand-outs, additional literature and articles.	various	Required	Via BlackBoard	Updated each year			
Practical Manual		Required	Via Blackboard	Updated each year			
<b>Estimated cost</b>							
<b>Cost item</b>	<b>Approximate cost in €</b>	<b>Comments</b>					
Literature/books	€26 €98	How to do Research/Gritt Intro to Agronomy					
Other travel	€30	Small excursion / group work, by own transportation. Based on estimated costs for public transport.					
<b>Remarks</b>	Module is reformulated from 3 to 2 terms. Assessment units altered.						

Course information system		Year of study: 2017-2018 Version: draft 5-2017	
<b>Study Programme</b>	International Food and Agribusiness		
<b>Course unit code</b>	IF2431		
<b>Course unit title</b>	Coaching & Skills 2.1		
<b>Location</b>	Den Bosch		
<b>Coordinator</b>	Janine Jalving (JaJa)		
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory		
<b>Language of instruction</b>	English		
<b>Credits (ECTS)</b>	2		
<b>Moment of delivery</b>	Year 2	Term 1	
<b>Prerequisites</b>	None		
<b>Application deadline</b>	1-5-2017		
<b>Content</b>	<p>The main goal of the module Coaching &amp; Skills 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 module offers opportunities to reflect on personality, behavior, attitude, etc. It supplies students with tools for change and improvement and offers them guidelines for reaching personal objectives.</p> <p>Moreover, the module Coaching &amp; Skills stimulates students to improve their language and communication skills in English, as well as their intercultural sensibility. In the second year, the focus lies on developing the students' English language (up to level C1, according to CEFR) and communication skills.</p> <p>In term 1 the students are trained in some important basic business communication skills such as email writing and telephoning.</p>		
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <p>5. Providing advice</p> <p><i>After successful completion, the student is able to:</i></p> <p>Ad 5:</p> <ul style="list-style-type: none"> <li>- use the English language flexibly and effectively for social, academic and professional purposes, both verbal and written, and including argumentation (business communication) <ul style="list-style-type: none"> <li>o use text, video and other materials as a source of information for debates, but also as an effective means to increase their vocabulary (verbal communication)</li> <li>o respond to work-related emails, such as feedback from colleagues and complaints from customers (written communication)</li> </ul> </li> </ul>		
<b>Learning activities and teaching methods</b>	<b>Method</b>	<b>Study load (hours)</b>	
	Practicals (5x 2hrs)	10	
	Homework assignments, incl. private study	36	
	Oral exam (incl. preparation)	4	
	Writing Exam (incl. preparation)	6	
	<b>Total</b>	<b>56</b>	
<b>Test matrix</b>			

<b>Part</b>	<b>Type of examination</b>	<b>Weighting factor</b>	<b>Bottom grade</b>	<b>Rating scale</b>	<b>Individual/ Group work</b>	<b>Time of examination (duration)</b>	<b>Resit</b>
Oral exam Business Communication	ORAL	1	4.0	1-10	IND	Wk 7 or 8	Next term
Written exam Business Communication	WRT	1	4.0	1-10	IND	Wk 9	Next term
<b>Study materials</b>							
<b>Title</b>	<b>Author</b>	<b>Status</b>	<b>Type</b>	<b>Code/comment</b>			
Study Manual (Coaching & Skills IF2)	Various	Required	Via Blackboard	Updated each year			
Materials for Business English	Various	Required	Via Blackboard	Updated each year			
<b>Estimated cost</b>							
<b>Cost item</b>	<b>Approximate cost in €</b>			<b>Comments</b>			
n.a.							
<b>Remarks</b>	-						

Course information system		Year of study: 2017-2018 Version: draft 5-2017					
<b>Study Programme</b>	International Food and Agribusiness						
<b>Course unit code</b>	IF2432						
<b>Course unit title</b>	Coaching & Skills 2.2						
<b>Location</b>	Den Bosch						
<b>Coordinator</b>	Janine Jalving (JaJa)						
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory						
<b>Language of instruction</b>	English						
<b>Credits (ECTS)</b>	2						
<b>Moment of delivery</b>	Year 2		Term 2				
<b>Prerequisites</b>	None						
<b>Application deadline</b>	1-5-2017						
<b>Content</b>	In term 2 the students start making plans for their third study year, which consists of traineeships, exchange programs and/or Minors (at HAS or other Universities). To properly prepare for possible applications and job interviews, the focus this term lies on writing letters of application, drawing up CVs, using social media in networking activities and online job search, and having job interviews.						
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <p>6. Networking &amp; influencing</p> <p>7. (Self)-reflection and judgement</p> <p>After successful completion, the student is able to:</p> <p>Ad 6:</p> <ul style="list-style-type: none"> <li>- communicate effectively <ul style="list-style-type: none"> <li>o write a letter of application and draw up an CV in proper business English</li> <li>o use social media in networking activities &amp; online job search</li> <li>o have a job interview in English, in which he presents himself and his USP's</li> </ul> </li> </ul> <p>Ad 7:</p> <ul style="list-style-type: none"> <li>- show insight in his/her personal strengths (assessed term 4) <ul style="list-style-type: none"> <li>o answer the question 'Who am I as an entrepreneur and consultant?'</li> <li>o reflect on team dynamic and own personality type ('colour')</li> </ul> </li> <li>- formulate SMART personal learning aims for the (near) future (assessed term 4)</li> <li>- reflect on his/her personal development (assessed term 4)</li> </ul>						
<b>Learning activities and teaching methods</b>	<b>Method</b>		<b>Study load (hours)</b>				
	Practicals (2) 'Letters of Application'		4				
	Workshop 'Job Interviews'		4				
	Homework assignments/private study		36				
	Oral exam (incl. preparation)		2				
	Writing assignment		10				
<b>Total</b>		<b>56</b>					
<b>Test matrix</b>							
<b>Part</b>	<b>Type of examination</b>	<b>Weighting factor</b>	<b>Bottom grade</b>	<b>Rating scale</b>	<b>Individual/ Group work</b>	<b>Time of examination (duration)</b>	<b>Resit</b>

Letters of Application	ASSI	1	4.0	1-10	IND	Wk 6 or 7	Next term
Job Interview	ORAL	1	4.0	1-10	IND	Wk 7, 8 or 10	Next term
<b>Study materials</b>							
<b>Title</b>	<b>Author</b>	<b>Status</b>		<b>Type</b>	<b>Code/comment</b>		
Study Manual (Coaching & Skills IF2)	Various	Required		Via Blackboard	Updated each year		
Quality E-E dictionary		Required		Online	n.a.		
<b>Estimated cost</b>							
<b>Cost item</b>	<b>Approximate cost in €</b>			<b>Comments</b>			
n.a.							
<b>Remarks</b>							

Course information system		Year of study: 2017-2018 Version: draft 5-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF2433	
<b>Course unit title</b>	Coaching & Skills 2.3	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Janine Jalving (JaJa)	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	3	
<b>Moment of delivery</b>	Year 2                      Term 3	
<b>Prerequisites</b>	None	
<b>Application deadline</b>	1-11-2017	
<b>Content</b>	<p>In term 3 the students learn how to give an enthusiastic sales pitch, in which they present their business idea to possible investors. They also practice how to pitch their financial plan. By doing so they enhance their business vocabulary, train their presentation techniques, and develop their personal performance.</p> <p>To determine their individual level of English at this point in their studies, the students also take the APTIS General language test of the British Council at the end of this term. Based on that, they develop a strategy to develop their individual language skills.</p> <p>In term 3 the students also go on an International Excursion to a foreign country to explore and study the agri- and food-business in another country. The destinations differ per year, this trip pays attention to broaden the students' intercultural awareness.</p>	
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <ol style="list-style-type: none"> <li>1. Improving sustainability of the Global Agri-food system</li> <li>4. Contributing to international business development</li> <li>5. Providing advice</li> <li>6. Networking &amp; influencing</li> <li>7. (Self)-reflection and judgement</li> </ol> <p>After successful completion, the student is able to:</p> <p>Ad 1:</p> <ul style="list-style-type: none"> <li>○ recognise sustainability aspects with actors within a agri-food system in practise</li> </ul> <p>Ad 4:</p> <ul style="list-style-type: none"> <li>○ reflect on opportunities in agri-food markets and supply chains in the country visited during the international excursion</li> </ul> <p>Ad 5:</p> <ul style="list-style-type: none"> <li>- use the English language flexibly and effectively for social, academic and professional purposes, both verbal and written, and including argumentation</li> <li>○ give a proper sales pitch and presentation in business English (verbal communication)</li> <li>○ successfully complete an English test at C1 level (see CEFR for details)</li> </ul> <p>Ad 6:</p> <ul style="list-style-type: none"> <li>- proactively get in contact with people</li> <li>○ apply basic networking skills, active listening</li> <li>- apply acquisition skills</li> <li>○ arrange an internship for year 3</li> </ul>	

	Ad 7: - show insight in his/her personal strengths (assessed term 4) o answer the question 'Who am I as an entrepreneur and consultant?' - formulate SMART personal learning aims for the (near) future - reflect on his/her personal development (assessed term 4)						
<b>Learning activities and teaching methods</b>	<b>Method</b>					<b>Study load (hours)</b>	
	Business Communication (e.g. sales pitch + presentation)					28	
	Workshop Intercultural Awareness					6	
	Coaching (Talent-Based, incl. study plan IF3)					10	
	International excursion (incl. preparation)					40	
<b>Total</b>					<b>84</b>		
<b>Test matrix</b>							
<b>Part</b>	<b>Type of examination</b>	<b>Weighting factor</b>	<b>Bottom grade</b>	<b>Rating scale</b>	<b>Individual/ Group work</b>	<b>Time of examination (duration)</b>	<b>Resit</b>
International Excursion (Participation, preparatory sessions)	EXCU	0	pass	pass/ fail	IND	Wk tbd (1 wk)	tbd
Business Communication	ASSI	0	pass	pass/ fail	IND	Wk 8 or 10	Next term
Coaching (incl. Study plan)	ASSI	0	pass	pass/ fail	IND	Wk 1-10	tbd
APTIS Test	ASSI	0	pass	pass/ fail	IND	Wk tbd (3 hr)	Yr 4
<b>Study materials</b>							
<b>Title</b>	<b>Author</b>	<b>Status</b>	<b>Type</b>	<b>Code/comment</b>			
Study Manual (Coaching & Skills IF2)	Various	Required	Via Blackboard	Updated each year			
Quality E-E dictionary		Required	Online	n.a.			
<b>Estimated cost</b>							
<b>Cost item</b>	<b>Approximate cost in €</b>			<b>Comments</b>			
International excursion	€ 650-850			Depends on destination / tbd			
<b>Remarks</b>	-						

Course information system		Year of study: 2017-2018 Version: draft 5-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF2435	
<b>Course unit title</b>	Circular Economy 1	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Mieke van Eerten-Jansen (EeMi)	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	4	
<b>Moment of delivery</b>	Year 1                      Term 1	
<b>Prerequisites</b>	None	
<b>Application deadline</b>	1-5-2017	
<b>Content</b>	<p>Food in a bio-based and circular economy comprises three aspects:</p> <ul style="list-style-type: none"> <li>- Efficient use of resources</li> <li>- Efficient use of food</li> <li>- Efficient use of residuals</li> </ul> <p>This module focuses on 'Efficient use of resources' and 'Efficient use of residuals', centralised around four <b>core themes</b>:</p> <p><u>Efficient use of resources</u></p> <p>Our current food production system – with a focus on primary production – gives high yields per hectare, but also requires high inputs and gives a lot of emissions. In this module, <b>agro-ecology</b> is covered as an alternative to current food production systems. Also, <b>soil quality</b> and its role in sustainable food production is covered.</p> <p><u>Efficient use of residuals</u></p> <p>About 1/3<sup>rd</sup> of our food produced is either lost or wasted. Although there are efforts to lower these numbers, it is inevitable that there will be food losses and waste in the future (e.g. non-edible parts of plants). Therefore, in this module the focus is on valorising these residuals. With <b>anaerobic digestion</b> – a mature technology applied worldwide – residuals can be converted into biogas and mineral-rich digestate (soil amendment). <b>Bio-refinery</b> aims to use residuals at its full potential; e.g. as alternative protein source.</p> <p>In an assignment, students will specialise themselves in one of these four themes.</p>	
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <p>2. Applying bio-based &amp; circular economy principles in agri-food systems</p> <p>9. Doing research</p> <p><i>After successful completion, the student is able to:</i></p> <p>Ad 2:</p> <ul style="list-style-type: none"> <li>- interrelate basic knowledge on agro-ecology, soil quality and organic residue <ul style="list-style-type: none"> <li>o apply the principles of agro-ecology to an agri-food company</li> <li>o apply the principles of soil quality conservation and improvement to an agri-food company</li> <li>o discuss composting and anaerobic digestion as valorization option for organic residues for an agri-food company</li> </ul> </li> </ul>	



	<ul style="list-style-type: none"> <li>o discuss valorization options for organic residues for an agri-food company that have higher value than compost or biogas</li> </ul> <p>Ad 9:</p> <ul style="list-style-type: none"> <li>- apply various research methodologies for collection of (primary) data of acceptable quality</li> <li>o write a theoretical background using up to date and trustworthy information sources</li> <li>o choose proper methods to answer the research question and justify the use of the methods</li> <li>o collect data in a correct and organised manner</li> </ul>						
<b>Learning activities and teaching methods</b>	<b>Method</b>	<b>Study load (hours)</b>					
	Theory is provided in weekly instruction lectures. Context is provided by guest lectures by professionals.	20					
	Private study	28					
	Assignment: tutor meetings	10					
	Assignment: practical/research	20					
	Assignment: private study	26					
	Excursion; visit an agri-food company active in the bio-based and circular economy, to learn about the four themes in practice.	8					
<b>Total</b>	<b>112</b>						
<b>Test matrix</b>							
<b>Part</b>	<b>Type of examination</b>	<b>Weighting factor</b>	<b>Bottom grade</b>	<b>Rating scale</b>	<b>Individual/ Group work</b>	<b>Time of examination (duration)</b>	<b>Resit</b>
Written exam on Circular Economy and Research skills	WRT	1	4.0	1-10	IND	Wk 9 (2 hrs)	Next term
Project on circular economy	PROJ	1	4.0	1-10	GRP	Wk 10	Next year
Attendance/participation	ASSI	0	pass	pass/fail	IND	Wk 8	tbd
<b>Study materials</b>							
<b>Title</b>	<b>Author</b>	<b>Status</b>	<b>Type</b>	<b>Code/comment</b>			
Study Manual Circular Economy 1	V. Eerten-Jansen and Van de Steeg	Required	Via Blackboard	Updated every year			
How to Do Research	Grit, R. and Julsing, M.	Required (also used in Domain track)	Book, website, templates	ISBN 978-90-01-86123-0			
Lecture hand-outs, add. literature and articles	Various	Required	Via BlackBoard	Indicated per year			
<b>Estimated cost</b>							
<b>Cost item</b>	<b>Approximate cost in €</b>			<b>Comments</b>			
Literature/books	€26			How to do research book Used throughout curriculum			
Group Excursion (by bus)	€15						
Other travel	€25			Small excursion / group work, by own transportation. Based on estimated costs for public transport.			
<b>Remarks</b>	This is a new module, and partly based on IF2422 Biobased Economy Domain (2016-2017).						

Course information system		Year of study: 2017-2018 Version: draft 5-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF2436	
<b>Course unit title</b>	Circular Economy 2	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Mieke van Eerten-Jansen (EeMi)	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	3	
<b>Moment of delivery</b>	Year 1                      Term 3	
<b>Prerequisites</b>	None	
<b>Application deadline</b>	1-11-2017	
<b>Content</b>	<p>Food in a bio-based and circular economy comprises three aspects:</p> <ul style="list-style-type: none"> <li>- Efficient use of resources</li> <li>- Efficient use of food</li> <li>- Efficient use of residuals</li> </ul> <p>This module focuses on 'Efficient use of residuals'.</p> <p><u>Efficient use of residuals</u></p> <p>In this module, focus is on valorisation of lignocellulosic materials; converting wheat and rice straw into bio-ethanol and bioplastics. Globally, rice straw is the third largest agricultural residue, and currently it is mostly burnt in the fields or mulched. Rice straw, however, could be turned into bio-ethanol or bioplastics.</p> <p>Students calculate on a bio-based business case, and thereby practice their excel skills. Besides, they will learn about important unit operations, such as fermentation, in converting by-products into bio-based products.</p>	
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <p>2. Applying bio-based &amp; circular economy principles in agri-food systems</p> <p><i>After successful completion, the student is able to:</i></p> <p>Ad 2:</p> <ul style="list-style-type: none"> <li>- determine the techno-economic feasibility by interrelating basic technological and economical knowledge <ul style="list-style-type: none"> <li>o explain the unit operations used in biobased production processes</li> <li>o calculate a simple business case using capacity and cost information provided by technology suppliers</li> <li>o discuss the SWOT and sustainability (PPP) of biobased production processes</li> </ul> </li> </ul>	
<b>Learning activities and teaching methods</b>	<b>Method</b>	<b>Study load (hours)</b>
	Theory is provided in weekly instruction lectures. Context is provided by guest lectures by professionals.	20
	Private study	28
	Work lectures on business case and unit operations	28
	Excursion; visit an agri-food company applying bio-based and circular economy	8

	principles, to learn about bio-based and circular economy in practice.						
<b>Total</b>						<b>84</b>	
<b>Test matrix</b>							
<b>Part</b>	<b>Type of examination</b>	<b>Weighting factor</b>	<b>Bottom grade</b>	<b>Rating scale</b>	<b>Individual/ Group work</b>	<b>Time of examination (duration)</b>	<b>Resit</b>
Test on bio-based business case	ASSI	1	5.5	1-10	IND	Wk 10	Next term
Assignment on bio-based business case (excel)	ASSI	0	pass	pass/fail	IND	Wk 8	Next year
Attendance/participation	ASSI	0	pass	pass/fail	IND	Wk 8	tbd
<b>Study materials</b>							
<b>Title</b>	<b>Author</b>	<b>Status</b>	<b>Type</b>	<b>Code/comment</b>			
Study Manual Circular Economy 2	V. Eerten-Jansen and Van de Steeg	Required	Via Blackboard	Updated every year			
Lecture hand-outs, additional literature and articles.	various	Required	Via BlackBoard	Indicated per year			
<b>Estimated cost</b>							
<b>Cost item</b>	<b>Approximate cost in €</b>	<b>Comments</b>					
Literature/books	0						
Group Excursion (by bus)	€15						
<b>Remarks</b>	This is a new module, and partly based on IF2422 Biobased Economy Domain 2016-2017.						

Course information system		Year of study: 2017-2018 Version: draft 6-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF2437	
<b>Course unit title</b>	Business Plan 1 (BPlan1)	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Hielke van der Meulen (MeHi)	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	4	
<b>Moment of delivery</b>	Year 2                      Term 3	
<b>Prerequisites</b>	None	
<b>Application deadline</b>	1-11-2017	
<b>Content</b>	<p>This module covers:</p> <ul style="list-style-type: none"> <li>- Developing an own business plan (concept)</li> <li>- Statistical analysis of a small market survey</li> </ul>	
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <p>4. Contributing to international business development 9. Doing research</p> <p><i>After successful completion, the student is able to:</i></p> <p>Ad 4:</p> <ul style="list-style-type: none"> <li>- analyse the market for a specific product <ul style="list-style-type: none"> <li>o analyse the market potential for a specific product(s)</li> <li>o identify potential competition using relevant models</li> <li>o execute a market research for a business idea</li> </ul> </li> <li>- draft the financial components of a business plan <ul style="list-style-type: none"> <li>o draw up an investment plan</li> <li>o make a cash flow calculation</li> </ul> </li> <li>- demonstrate entrepreneurship by means of developing a business plan (in IF2439 BPlan 2) <ul style="list-style-type: none"> <li>o explain processes of innovation and business development</li> </ul> </li> </ul> <p>Ad 9:</p> <ul style="list-style-type: none"> <li>- analyse and judge collected data for discussion and formulating conclusions <ul style="list-style-type: none"> <li>o perform some basic statistic calculations (f.i. mean, standard deviation, frequencies, crosstabs, Chi-square, analysis of variance) on a given data set from a market survey, making use of statistical software (SPSS program or comparable)</li> <li>o test a given hypothesis</li> </ul> </li> </ul>	
<b>Learning activities and teaching methods</b>	<b>Method</b>	<b>Study load (hours)</b>
	Thematic lectures	20
	Working lectures, interactive	5
	Guest lectures	5
	Company visit	5
	Project: business plan (concept)	50
	Private study/exam	27

		<b>Total</b>					<b>112</b>	
<b>Test matrix</b>								
<b>Part</b>	<b>Type of examination</b>	<b>Weighting factor</b>	<b>Bottom grade</b>	<b>Rating scale</b>	<b>Individual/ Group work</b>	<b>Time of examination (duration)</b>	<b>Resit</b>	
Written exam Business (entrepreneurship)	WRT	1	4.0	1-10	IND	Wk 9 (2 hrs)	Next term	
Written exam Statistics	WRT	1	5.5	1-10	IND	Wk 9 (2 hrs)	Next term	
Project	PROJ	2	4.0	1-10	IND	Wk 10	tbd	
Attendance and excursion(s)	EXCU	0	pass	pass/fail	IND	Wk 1-10	tbd	
<b>Study materials</b>								
<b>Title</b>	<b>Author</b>	<b>Status</b>	<b>Type</b>	<b>Code/comment</b>				
Study Manual Business Plan 1	H. van der Meulen	Required	Via Blackboard	Updated each year				
Entrepreneurship; Starting and Operating a Small Business	S. Mariotti & C Glackin (2014, Prentice Hall)	To be determined	Book	ISBN 978-0132784085				
Statistics and SPSS	HAS University of Applied Sciences	Required	Reader, digitally via BlackBoard					
Lecture hand-outs, add. literature and articles	various		Via BlackBoard	Indicated per year				
<b>Estimated cost</b>								
<b>Cost item</b>	<b>Approximate cost in €</b>			<b>Comments</b>				
Literature/books	€ 50			Entrepreneurship book or other. Used in Business plan 1 and 2.				
Group Excursion (by bus)	€ 15			Admission/travel				
Other travel	€ 20			Project work/interviews, by own transportation. Depending on location.				
<b>Remarks</b>	IF2403 Business plan 1 (5 ECTS/T2) and IF2426 Business plan 2 (5 ECTS/T3) are replaced by this module IF2437 BP1 (4 ECTS/T3) and IF2439 Business plan 2 (6 ECTS/T4)							

Course information system		Year of study: 2017-2018 Version: draft 5-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF2438	
<b>Course unit title</b>	Food Governance	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Bram van Helvoirt (HeBr)	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	5	
<b>Moment of delivery</b>	Year 2	Term 2
<b>Prerequisites</b>	None	
<b>Application deadline</b>	1-5-2017	
<b>Content</b>	<p>Within the Food Governance module, the following topics are covered:</p> <ul style="list-style-type: none"> <li>• International and EU Food Law</li> <li>• International (food) trade regulation</li> <li>• Food safety regulation</li> <li>• Public and private governance of agri-food chains</li> <li>• Policy implementation and compliance</li> <li>• Policy (in)coherence and food politics</li> <li>• Governance of sustainable food production and trade</li> <li>• Ethics in global food trade</li> </ul>	
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <p>1. Improving sustainability of the Global Agri-food system 4. Contributing to international business development 7. (Self)-reflection and judgement 8. Project management</p> <p><i>After successful completion, the student is able to:</i></p> <p>Ad 1:</p> <ul style="list-style-type: none"> <li>- explain the rationale behind the different elements of food governance and their interconnectivity (ad 1) <ul style="list-style-type: none"> <li>o identify the different food-related policies and involved organisations at different levels of scale</li> <li>o describe the processes behind food policy making and the key actors involved</li> <li>o discuss the implementation of food (safety) policies</li> <li>o understand the basic principles of European Agricultural Policy</li> <li>o indicate key principles of international trade and trade agreements</li> <li>o interpret the implications of food policies on food chain actors in different parts of the world</li> <li>o distinguish policy (in)coherences in global food governance and discuss its implications</li> <li>o conduct trade and policy research that allows to draw conclusions on the export potential of food products from a developing country</li> </ul> </li> </ul> <p>Ad 4:</p> <ul style="list-style-type: none"> <li>- demonstrate a basic understanding of trade policy and instruments <ul style="list-style-type: none"> <li>o understand the logic of trade benefits</li> <li>o identify pros and cons of free trade and protection in food and trade policy for both countries and companies</li> </ul> </li> </ul> <p>Ad 7:</p> <ul style="list-style-type: none"> <li>- reason logically on simple ethical issues (ad 7) <ul style="list-style-type: none"> <li>o critically reflect upon ethical issues in a clearly defined international and intercultural setting, from a personal perspective</li> </ul> </li> </ul>	

	<b>Ad 8:</b> - write a well-structured report about a project <ul style="list-style-type: none"> <li>o write a well-structured report in cooperation with peers</li> </ul> - act as a project leader (name, oversee and divide tasks, and coordinate the process) (or within another Y2 module) - show effective communication and collaboration skills as project team member - complete tasks and prioritise within a project with multiple elements						
<b>Learning activities and teaching methods</b>	<b>Method</b>					<b>Study load (hours)</b>	
	(Guest) lectures					25	
	Tutorials & scheduled project meetings					8	
	Excursion					8	
	Exam and evaluation					3	
	Ethics (lecture, assignment)					28	
	Self-study, including project assignment					68	
<b>Total</b>					<b>140</b>		
<b>Test matrix</b>							
<b>Part</b>	<b>Type of examination</b>	<b>Weighting factor</b>	<b>Bottom grade</b>	<b>Rating scale</b>	<b>Individual/ Group work</b>	<b>Time of examination (duration)</b>	<b>Resit</b>
Written exam on Food Governance curriculum	WRT	2	4.0	1-10	IND	Wk 9 (2 hrs)	Next term
Assignment Ethics	ASSI	1	5.5	1-10	IND	Wk 7	Next term
Attendance excursion & guest lectures	EXCU	0	pass	pass/fail	IND	Wk 10	Next year or tbd
Project Getting food into Europe	PROJ	2	4.0		GRP/IND	Wk 10	
- Country report		40%	4.0	1-10	GRP	Wk 9	Next year
- Product report		40%	4.0	1-10	IND	Wk 9	Next term
- Presentation		20%	4.0	1-10	GRP	Wk 5	Next year
<b>Study materials</b>							
<b>Title</b>	<b>Author</b>	<b>Status</b>	<b>Type</b>	<b>Code/comment</b>			
Study Manual	Van Helvoirt, B.	Required	Via Blackboard	Updated every year			
Roadmap to EU food law (2011)	Scholten-Verheijen, I., et al.	Required	Book	ISBN9789490947262, Eleven Int'l Publishing SDU			
The Ethical Cycle (Journal of Business Ethics, 2007)	Van de Poel, I., Royackers, L.	Required	Article, via Blackboard	Article URL			
Lecture hand-outs, add. literature and articles	Various	Required	Via BlackBoard	Indicated per year			
<b>Estimated cost</b>							
<b>Cost item</b>	<b>Approximate cost in €</b>			<b>Comments</b>			
Literature/books	€50			Roadmap			
Group Excursion (by bus)	€20			Excursion to Brussels (EC)			
Other travel	€20			Interview with expert, by own transportation/public transport.			
<b>Remarks</b>	Different from last year; the excursion will be to Brussels. Excursion to Rotterdam harbour is moved to IF2416 Supply Chain Management Replaces module IF2404 Food Governance (6 ECTS).						

Course information system		Year of study: 2017-2018 Version: draft 7-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF2439	
<b>Course unit title</b>	Business Plan 2 (BPlan2)	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Hielke van der Meulen (MeHi)	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	6	
<b>Moment of delivery</b>	Year 2                      Term 4	
<b>Prerequisites</b>	IF2437 Business Plan 1 (BPlan1)	
<b>Application deadline</b>	1-11-2017	
<b>Content</b>	<p>This module covers:</p> <ul style="list-style-type: none"> <li>- Developing a full-fledged business plan (based on concept from BPlan1)</li> <li>- Financial statements and financing options</li> </ul>	
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications: 4. Contributing to international business development</p> <p>The module builds on the learning objectives of IF2437 Business Plan 1, and in addition:</p> <p><i>After successful completion, the student is able to:</i></p> <ul style="list-style-type: none"> <li>- demonstrate entrepreneurship by means of developing a business plan <ul style="list-style-type: none"> <li>o identify his/her entrepreneurial qualities, compare them to those of fellow students and successful entrepreneurs in general</li> <li>o elaborate the management aspects of a new venture in a business plan</li> <li>o conclude on the feasibility of a self-elaborated business idea</li> </ul> </li> <li>- draft the financial components of a business plan <ul style="list-style-type: none"> <li>o draw up a profit and loss statement and draw conclusions</li> <li>o draw up a balance sheet and corresponding ratios</li> </ul> </li> <li>- compose a proper financing plan and compare different financing options</li> <li>- explain the role of finance for business development, both in high- and low-income economies</li> </ul>	
<b>Learning activities and teaching methods</b>	<b>Method</b>	<b>Study load (hours)</b>
	Thematic lectures	25
	Working lectures, interactive	5
	Guest lectures	10
	Company visit	10
	Project: business plan	60
	Private study/exam	58
<b>Total</b>	<b>168</b>	



Test matrix							
Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
Written exam Business (entrepreneurship)	WRT	1	4.0	1-10	IND	Wk 9 (2 hrs)	Next term
Project (incl. Financials) - Report - presentation	PROJ	2	4.0	1-10	IND	Wk 10	tbd
Attendance and excursion(s)	EXCU	0	pass	pass/ fail	IND	Wk 1-10	tbd
Study materials							
Title	Author	Status	Type	Code/comment			
Study Manual, 1718	H. van der Meulen	Required	Via Blackboard	Updated each year			
Entrepreneurship; Starting and Operating a Small Business	S. Mariotti & C Glackin (2014, Prentice Hall)	To be determined / see BP1	Book	ISBN 978-0132784085			
Business Financials	HAS University of Applied Sciences	Required	Reader, digitally via BlackBoard				
Lecture hand-outs, add. literature and articles	various		Via BlackBoard	Indicated per year			
Estimated cost							
Cost item	Approximate cost in €	Comments					
Literature/books		Already in possession, see BP1					
Group Excursion (by bus)	€ 15	Admission/travel					
Other travel	€ 20	Project work/interviews, by own transportation. Depending on location.					
Remarks	IF2403 Business plan 1 (5 ECTS/T2) and IF2426 Business plan 2 (5 ECTS/T3) are replaced by IF2437 BP1 (4 ECTS/T3) and this module IF2439 Business plan 2 (6 ECTS/T4)						

Course information system		Year of study: 2017-2018 Version: draft 5-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF2440	
<b>Course unit title</b>	Coaching & Skills 2.4	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>		
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	1	
<b>Moment of delivery</b>	Year 2                      Term 4	
<b>Prerequisites</b>	None	
<b>Application deadline</b>	1-11-2017	
<b>Content</b>	In term 4 the students finalise their plan for study year 3, and discuss the outcomes with their coach. They also reflect upon their personal development over the past 2 years. They evaluate their learning aims, and use the feedback received from their lecturers, coach, and fellow-students. In addition, they undertake diverse extra-curricular activities (self-management, 20 hours in total) which add to personal and/or professional development.	
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <p>7. (Self)-reflection and judgement 8. Project management</p> <p><i>After successful completion, the student is able to:</i></p> <p>Ad 7:</p> <ul style="list-style-type: none"> <li>- show insight in his/her personal strengths <ul style="list-style-type: none"> <li>o answer the question 'Who am I as an entrepreneur and consultant?'</li> </ul> </li> <li>- formulate SMART personal learning aims for the (near) future</li> <li>- reflect on his/her personal development</li> <li>- give and receive feedback, and judge external information leading to the formation of a personal opinion</li> </ul> <p>Ad 8:</p> <ul style="list-style-type: none"> <li>- act as a project leader (name, oversee and divide tasks and coordinate the process) (based on performance in other year 2 modules)</li> </ul>	
<b>Learning activities and teaching methods</b>	<b>Method</b>	<b>Study load (hours)</b>
	Self-management	20
	Coaching (Talent-Based, incl. study plan IF3)	8
	<b>Total</b>	<b>28</b>

Test matrix							
Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
Coaching (reflection report and Study plan for IF3)	ASSI	0	pass	pass/ fail	IND	Wk 8 or 10	Next term
Self-management	ASSI	0	pass	pass/ fail	IND	Wk 8 or 10	Next term
Study materials							
Title	Author	Status	Type	Code/commen ce			
Study Manual (Coaching & Skills IF2)	Various	Required	Via Blackboard	Updated each year			
Quality E-E dictionary		Required	Online	n.a.			
Estimated cost							
Cost item	Approximate cost in €	Comments					
n.a.							
Remarks	-						

## YEAR 3

Course information system		Year of study: 2017-2018 Version: draft 5-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IFBI15/22/23/30, IFBU15/22/23/30 (various codes depending on length of internship period)	
<b>Course unit title</b>	IFA third-year elements: internship(s), minor(s)	
<b>Location</b>	Den Bosch or elsewhere	
<b>Coordinator</b>	Peter van Schie	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	60 ECTS in total; elements of 15 ECTS (10 wks), 22 or 23 ECTS (15 wks) or 30 ECTS (20 wks)	
<b>Moment of delivery</b>	Year 3 Term 1-4	
<b>Prerequisites</b>	Propaedeutic diploma Minimum of 40 ECTS from IFA second year modules	
<b>Application deadline</b>	1-5-2017	
<b>Content</b>	<p>Practical and theoretical experience in an organisation or company in the future professional field, and at the HAS or other university.</p> <p>At least one element is in the student's chosen domain, at least one element is in an international business environment, and at least one element is abroad.</p>	
<b>Learning outcomes</b>	<p>The total of elements in year 3 contribute to the following program qualifications:</p> <ol style="list-style-type: none"> <li>1. Improving sustainability of the Global Agri-food system</li> <li>3. Contributing to sustainable innovation in the sector of student's chosen domain</li> <li>4. Contributing to international business development</li> <li>5. Providing advice</li> <li>6. Networking &amp; influencing</li> <li>7. (Self)-reflection and judgement</li> <li>8. Project management</li> <li>9. Doing research</li> </ol> <p>At level 2 of the qualifications:</p> <ul style="list-style-type: none"> <li>- identify issues in agri-food systems and contribute to a solution in a clearly arranged situation (ad 1)</li> <li>- analyse and evaluate (technological) processes in a sector (animal production, crop production, or food processing and nutrition) in an international context (ad 3)</li> <li>- identify opportunities in agri-food markets and supply chains in developing as well as established countries and with that is able contribute to business development in a clearly arranged situation (ad 4)</li> <li>- formulate a well-argued advice towards sustainable improvement of operational management on business level in the international agri-food sector (ad 5)</li> <li>- network with stakeholders in the international food system (6)</li> <li>- give and receive feedback, judge external information and situations, and reflect on ethical issues, leading to the formation of a personal opinion (7)</li> <li>- coordinate and execute a simple project independently or a well-guided complex project, in an international context and real-life cases (8)</li> </ul>	

	- formulate a research question and execute a simple, well-guided research (9)						
<b>Learning activities and teaching methods</b>	<b>Method</b>					<b>Study load (1 ECTS = 28 hrs)</b>	
	Internship (of 15, 22/23, 30 ECTS)					min. 30 and max.45	
	Minors (in Netherlands and/or abroad)					min. 15 and max.30	
	<b>Total</b>					<b>60 ECTS</b>	
<b>Test matrix (Internships)</b>							
<b>Part</b>	<b>Type of examination</b>	<b>Weighting factor</b>	<b>Bottom grade</b>	<b>Rating scale</b>	<b>Individual/ Group work</b>	<b>Time of examination (duration)</b>	<b>Resit</b>
Internship	ASSI	1	5.5	1-10	IND		tbd
- Process/reflection (part of report)		30%	5.5	1-10	IND	within 1 wk of end	Retake entire internship
- Report		40%	5.5	1-10	IND	within 1 wk of end	Rewrite within 1 term
- Company assessment (serves as advice towards result for process)		0	5.5	1-10	IND	within 1 wk of end	n.a.
- Assessment interview		30%	6.0	1-10	IND	within 1 month of end	In consultation with HAS supervisor
<b>Study materials</b>							
<b>Title</b>	<b>Author</b>	<b>Status</b>	<b>Type</b>	<b>Code/comment</b>			
Study Manual 'IFA Third-year internships and minor programmes'	Esther van Lieshout	Required	Via Blackboard	Updated each year			
Project Management, a practical approach	Grit	Required	Book	Already in possession			
How to do Research	Grit and Julsing	Required	Book	Already in possession			
A writer's reference	Hacker & Sommers	Required	Book	Already in possession			
<b>Estimated cost</b>							
<b>Cost item</b>	<b>Approximate cost in €</b>			<b>Comments</b>			
Travel, accomodation, meals				Depending on destination and length of stay			
Books, other study materials							
<b>Remarks</b>							

Course information system		Year of study 2017-2018 Version: draft 5-2017
<b>Study Programme</b>	International Food & Agribusiness	
<b>Course unit code</b>	MN3403	
<b>Course unit title</b>	International Business & Development	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Marnix Wolters (WoMa)	
<b>Type of course unit</b>	<input type="checkbox"/> Mandatory <input checked="" type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	15	
<b>Moment of delivery</b>	Year 3                      Term 4	
<b>Prerequisites</b>	Completed propaedeutic phase and 40 ECTS of 2 <sup>nd</sup> year bachelor program, interest in developing economies and Agri, Food or Environment	
<b>Application deadline</b>	1-11-2017	
<b>Content</b>	<p>The third year minor MN3403 International Business &amp; Development provides a multi stakeholder learning arena on establishing new business in upcoming economies. In a multidisciplinary team, with students from different programs, students work on a company assignment, supported by lectures and literature. The real-life project focusses at the development of new activities in a developing country. Students look at business aspects, the work of NGO's and government, their mission, vision and policies, the building of smallholder cooperatives and the influence of physical aspects such as infrastructure, IT and technology.</p>	
<b>Learning outcomes</b>	<p><i>After successful completion, the student is able to:</i></p> <p><i>Multidisciplinary approach</i></p> <ul style="list-style-type: none"> <li>- use his/her specialist knowledge and experience in an interdisciplinary context, relating his knowledge to that of others, thus creating added value</li> <li>- operate in an international project setting, involving partners at long distance</li> </ul> <p><i>Societal awareness</i></p> <ul style="list-style-type: none"> <li>- identify social, environmental and economic impact and dilemmas of projects in their chosen field of work, as well as the contribution they can make</li> <li>- demonstrate awareness of inequality problems and poverty problems</li> </ul> <p><i>Business</i></p> <ul style="list-style-type: none"> <li>- understand the impact of the geographical context in which a business operates</li> <li>- understand the vision and mission of and impact generated by international NGO's and can distinguish relevant relations</li> <li>- understand the impact of smallholder aggregations on business operations</li> <li>- understand the rationale behind the BoP approach and can apply the concept of inclusive business</li> <li>- know the history of economic policy, as well as present theories and practices</li> <li>- understand the practices and principles of foreign direct investment</li> </ul>	

Learning activities and teaching methods	Method		Study load (hours)				
	Lectures and guest lectures		80				
	Tutor meetings		10				
	Exchange program		40				
	Self-study and project work		290				
<b>Total</b>		<b>420</b>					
Test matrix							
Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/Group work	Time of examination (duration)	Resit
Written test	WRT	2	4.0	1-10	IND	Week 10 (2 hrs)	Next term
Group project	PROJ	2	4.0	1-10	GRP	Week 8	tbd
Individual assignment	ASSI	1	4.0	1-10	IND	Week 8	tbd
Exchange program	ASSI	0	pass	pass /fail	IND	Week 7	tbd
Excursion, guest lectures, attendance	EXCU	0	pass	pass /fail	IND	Week 1-10	tbd
Recommended or required reading							
Title	Author	Status	Type	Code			
Study Manual International Business & development	M. Wolters	Required	Via Blackboard	Updated each year			
Economics, the users' guide	Chang, H.J.	Required	Book	ISBN9780718197032 (paperback)			
Various articles	online	Required	Via Blackboard	Indicated per year			
Estimated cost							
Cost item	Approximate cost in €			Comments			
Literature/books	€ 10						
Exchange	€ 100			Exchange visit Anhalt (Germany)			
Other travel	€ 25			Company visit by public transportation, dependant on assignment (if not in possession of public transportation card)			
Remarks							

## YEAR 4

Course information system		Year of study: 2017-2018 Version: draft 6-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	MN4411	
<b>Course unit title</b>	Future Food Systems	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Erwin Bouwmans (Bouw)	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	30	
<b>Moment of delivery</b>	Year 4 Term 1 + 2	
<b>Prerequisites</b>	<p><i>HAS students and students of other Dutch institutions:</i> Propaedeutic diploma, plus 45+ 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.</p> <p><i>International admissions:</i> 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 internship 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.</p>	
<b>Application deadline</b>	1-5-2017	
<b>Content</b>	<p>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.</p> <p>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.</p> <p>In this module students further investigate production chains and come up with ideas for 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.</p> <p>The Minor is divided into four main topics:</p> <ol style="list-style-type: none"> <li>1. Transition of a sector or country in a wider system with other stakeholders (government, knowledge institutions, civil society).</li> <li>2. Leadership and Personal leadership, and development hereof.</li> <li>3. Innovation at process and company (link) level within the current situation.</li> <li>4. Domain: crop, animal, food or bio-based economy.</li> </ol>	
<b>Learning outcomes</b>	<p>The module contributes to all program qualifications, at the final level:</p> <ol style="list-style-type: none"> <li>1. Improving sustainability of the Global Agri-food system</li> <li>2. Applying bio-based &amp; circular economy principles in agri-food systems</li> <li>3. Contributing to sustainable innovation in a sector (animal production, crop production or food processing/nutrition)</li> <li>4. Contributing to international business development</li> <li>5. Providing advice</li> <li>6. Networking &amp; influencing</li> </ol>	



	<p>7. (Self)-reflection and judgement  8. Project management  9. Doing research</p> <p><i>After successful completion, the student is able to:</i></p> <p>Ad 1</p> <ul style="list-style-type: none"> <li>- analyse business /sectors in the context of a global food system (past)</li> <li>- to analyse future trends and to develop future scenarios</li> <li>- perceive a supply chain as a system, and oversee the players in it</li> </ul> <p>Ad 2</p> <ul style="list-style-type: none"> <li>- interrelate processes and business practices regarding agri-food systems</li> <li>- contribute to circular/bio-based agri-food systems</li> </ul> <p>Ad 3</p> <ul style="list-style-type: none"> <li>- complete analysis of production systems to identify long term trends and opportunities within the (animal, crop or food) sector</li> <li>- apply insights in current developments in his/her domain to identify opportunities in his/her domain production systems that contribute to more sustainable systems</li> </ul> <p>Ad 4</p> <ul style="list-style-type: none"> <li>- come up with new business ideas for an existing company to improve sustainability <ul style="list-style-type: none"> <li>o compare and select different options using a multi criteria analysis and impact analysis</li> </ul> </li> <li>- identify promising niches and new business models from future scenario studies</li> </ul> <p>Ad 5</p> <ul style="list-style-type: none"> <li>- provide advice on options for the implementation of a sustainability project within a production field</li> </ul> <p>Ad 6</p> <ul style="list-style-type: none"> <li>- contribute to transitions in a niche, business or project (internal)</li> <li>- contribute to transitions in a network with stakeholders (external)</li> </ul> <p>Ad 7</p> <ul style="list-style-type: none"> <li>- identify and understand personal and interpersonal strengths</li> <li>- reflect on personal Value Based Leadership in the light of the ever-changing agri-food complex</li> <li>- reflect on the development of one's own talents and those of fellows in a group</li> </ul> <p>Ad 8</p> <ul style="list-style-type: none"> <li>- select and justify project management method</li> <li>- write a complete project plan in a complex situation in relation with the client</li> <li>- execute a project according to planning and budget (resources and money)</li> <li>- effectively manage projects showing effective project management skills</li> <li>- recognize and evaluate his/her own role in a group</li> <li>- place own role within the larger context</li> <li>- clearly communicate within multi-stakeholder environment and manage expectations</li> <li>- identify connections within a sector and determine the common objectives for projects and collaboration</li> </ul> <p>Ad 9</p> <ul style="list-style-type: none"> <li>- 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)</li> </ul>	
<b>Learning activities and teaching methods</b>	<b>Method</b>	<b>Study load</b>
	Thematic lectures and excursions on Transition and Scenarios	2 ects
	Lectures Project management	1 ects
	Leadership; College Tours, Workshops, Food Experience	6 ects
	Innovation; lectures, field days	2 ects

	Domain; lectures doing research, Individual Research, Domain lectures					9 ects	
	Group Project in which students apply content to a real-life case					10 ects	
	<b>Total</b>					<b>30 (840 hrs)</b>	
<b>Test matrix</b>							
Part	Type of examination	Weighting factor	Bottom grade	Rating scale	Individual/ Group work	Time of examination (duration)	Resit
Written exam Transition	WRT	2	4.0	1-10	IND	Wk 9 (2 hrs)	Wk 19
Reflection report leadership (dossier)	ASSI	3	5.5	1-10	IND	Wk 15	Wk 19
Individual research (report + defence)	ASSI	3	5.5	1-10	IND	Wk 17	Wk 19
Test on Domain lectures (oral or written)	ASSI	2	4.0	1-10	IND	Wk 15	Wk 19
Group Project	PROJ	10	5.5	1-10	GRP	Wk 19	tbd
Attendance/participation	ASSI	0	pass	pass/fail	IND	Wk 18	tbd
<b>Study materials</b>							
Title	Author	Status	Type	Code/comment			
Study Manual, 1718	various	Required	Via Blackboard	Updated each year			
How to Do Research	Grit, R. and Julsing, M.	Required	Book, website, templates	ISBN9789001861230. Already in possession (yr 2)			
Project Management	Grit, R.	Required	Book, website, templates	ISBN9789001790929. 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	Via BlackBoard	Indicated per year			
<b>Estimated cost</b>							
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					
<b>Remarks</b>	Some changes compared to 1617. The two projects are combined in one; the business assignment will be in the same country as the transition assignment.						



Course information system		Year of study: 2017-2018 Version: draft 6-2017
<b>Study Programme</b>	International Food and Agribusiness	
<b>Course unit code</b>	IF4403	
<b>Course unit title</b>	Professional Assessment	
<b>Location</b>	Den Bosch	
<b>Coordinator</b>	Erwin Bouwmans	
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory	
<b>Language of instruction</b>	English	
<b>Credits (ECTS)</b>	2	
<b>Moment of delivery</b>	Year 4                      Term 3+4	
<b>Prerequisites</b>	None	
<b>Application deadline</b>	1-11-2017	
<b>Content</b>	<p>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, and include data and information to support their reflections. Coaching sessions and guest lectures from international recruiters will guide them in this process.</p> <p>At the end of term 4, a professional assessment interview will take place during which the student will present and discuss the content of this portfolio. This interview is conducted by an IFA examiner and an external person from the IFA professional field.</p>	
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <p>6. Network &amp; influencing 7. (Self)-reflection &amp; judgement</p> <p><i>After successful completion, the student is able to:</i></p> <p>Ad 6</p> <ul style="list-style-type: none"> <li>- communicate effectively <ul style="list-style-type: none"> <li>o present himself and his skills and competences professionally</li> <li>o represent International Food &amp; Agribusiness program (IFA Ambassador)</li> </ul> </li> <li>- develop account management skills <ul style="list-style-type: none"> <li>o proactively connect with people and connect people</li> <li>o apply key concepts from networking theory (e.g. emotional bank account / Covey)</li> </ul> </li> <li>- develop acquisition skills <ul style="list-style-type: none"> <li>o acquire job (professional employment after graduation)</li> </ul> </li> </ul> <p>Ad 7</p> <ul style="list-style-type: none"> <li>- reflect on personal Value Based Leadership in the light of the ever-changing agri-food complex</li> <li>- reflect on the development of one's own talents and those of fellows in a group</li> <li>- reflect on own skills and competences and personal development in relation to the IFA qualifications and the study programme as a whole <ul style="list-style-type: none"> <li>o identify and understand personal and interpersonal strengths</li> <li>o demonstrate an insight into personal skills and competences and personal development over the past 4 to 5 years</li> </ul> </li> </ul>	

	<ul style="list-style-type: none"> <li>o answer the questions 'Who am I as leader and group member in project teams?'</li> <li>- demonstrate an insight into his/her ambitions and future career or career options</li> <li>o answer the question 'Who am I after graduation?'</li> </ul>						
<b>Learning activities and teaching methods</b>	<b>Method</b>					<b>Study load (hours)</b>	
	Introduction lecture and Feedback Leadership					3	
	Guest lectures International Recruitment (2)					4	
	Portfolio development & preparation assessment					36	
	2 interviews with professionals from the industry					10	
	Criterion focused interview					3	
	<b>Total</b>					<b>56</b>	
<b>Test matrix</b>							
<b>Part</b>	<b>Type of examination</b>	<b>Weighting factor</b>	<b>Bottom grade</b>	<b>Rating scale</b>	<b>Individual/ Group work</b>	<b>Time of examination (duration)</b>	<b>Resit</b>
Portfolio	ASSI	0	pass	pass /fail	IND	T4	tbd
Criterion focused interview	ORAL	0	pass	pass /fail	IND	T4 (1 hr)	tbd
<b>Study materials</b>							
<b>Title</b>	<b>Author</b>		<b>Status</b>		<b>Type</b>	<b>Code/comment</b>	
Study Manual Professional Assessment	E. Bouwmans, M. Lensing		Required		Via Blackboard	Updated each year	
<b>Estimated cost</b>							
<b>Cost item</b>	<b>Approximate cost in €</b>				<b>Comments</b>		
<b>Remarks</b>							



Course information system		Year of study: 2017-2018 Version: draft 6-2017					
<b>Study Programme</b>	International Food and Agribusiness						
<b>Course unit code</b>	IF4450						
<b>Course unit title</b>	Professional Assignment (PA)						
<b>Location</b>	Den Bosch						
<b>Coordinator</b>	Marnix Wolters (WoMa)						
<b>Type of course unit</b>	<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Not mandatory						
<b>Language of instruction</b>	English						
<b>Credits (ECTS)</b>	28						
<b>Moment of delivery</b>	Year 4 Term 3						
<b>Prerequisites</b>	Propaedeutic phase completed, 40+ ECTS year 2, all internships completed						
<b>Application deadline</b>	1-11-2017						
<b>Content</b>	In the Professional Assignment the student demonstrates his skills in a real life business assignment, provided by a company or organization that is relevant to the IFA work field. The module is graded on content (50%) and professionalism (50%).						
<b>Learning outcomes</b>	<p>The module contributes to the following program qualifications:</p> <p>1. Improving sustainability of the Global Agri-food system  4. Contributing to international business development  5. Providing advice  7. (Self)-reflection and judgement  8. Project management  9. Doing research</p> <p>See PA manual for detailed learning objectives. The 8 aspects of Professionalism are linked to the program qualifications as follows:</p> <p>Q 1, 4 - 'Professional Expertise' (B1)  Q 5 - 'Customer orientation' (B4), 'Communication skills' (B7)  Q 7 - 'Independence' (B6), 'Self-reflective ability' (B8)  Q 8 - 'Project management skills' (B3),  'Flexible cooperation' (B5), Communication skills (B7)  Q 9 - 'Research skills' (B2)</p>						
<b>Learning activities and teaching methods</b>	<b>Method</b>					<b>Study load (hours)</b>	
	The project is based on tutor supported self-study, in which tutor meetings are scheduled based on necessity					748	
	<b>Total</b>					<b>784</b>	
<b>Test matrix</b>							
<b>Part</b>	<b>Type of examination</b>	<b>Weighting factor</b>	<b>Bottom grade</b>	<b>Rating scale</b>	<b>Individual/ Group work</b>	<b>Time of examination (duration)</b>	<b>Resit</b>
Professional Assignment	ASSI	1	5.5	1-10	IND	Wk 20	tbd
- Products (Project plan, report, extra product(s))		50%	5.5	1-10			tbd
- Professionalism		50%	5.5	1-10			Tbd
<b>Study materials</b>							
<b>Title</b>	<b>Author</b>	<b>Status</b>	<b>Type</b>	<b>Code/comment</b>			
PA Manual, 1718	Kreggemeijer, A. et al.	Required	Via Intranet	Updated each year			
<b>Estimated cost</b>							
<b>Cost item</b>	<b>Approximate cost in €</b>			<b>Comments</b>			
				n.a., within PA budget			
<b>Remarks</b>							

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