



AERES
UNIVERSITY OF
APPLIED SCIENCES
DROTEN

Course catalogue

International Horticulture & Management (IHM)

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2024-2026

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1 Introduction

General information - International Horticulture & Management	
Code	IHCM
Title	International Horticulture & Management
Croho	34868
ISCED Code	0812
Cycle	First
Duration	2 years - 120 ECTS
Academic Year	2024-2026
Mode of study	Fulltime
Language of Instruction and exams / assessments	English
Title after graduation	Bachelor of Science
Brief description of the main focus of the programme	<p>In the short degree programme International Horticulture & Management the student will harvest in-depth knowledge of innovative techniques in horticulture and plant breeding. Lectures, excursions and practical training will prepare the student to make a difference in the horticultural sector.</p> <p>This 2-year programme starts off with visits to horticultural companies and lectures on horticulture in the Netherlands. The first semester is made up of two modules. One on international strategic innovation and the other on international corporate social responsibility and quality management systems.</p> <p>In the second semester the student will follow 7 weeks of studying subjects such as genotyping, genetics, crop protection and plant pathology at our partner university ESA Angers in France. After these studies, the student will carry out a practical placement of 9 weeks. The semester concludes with exams at Angers.</p> <p>In the second year, the student will focus on either entrepreneurship, extension services or plant breeding. Both will prepare the student for a career in an international business setting. The student will be able to put the skills and knowledge gained into practice during an (international) company placement, during which the student will work on an individual research project. The programme will be concluded with the writing and defending of a thesis.</p>
Arrangements for academic guidance	The quality of the programme is continuously being monitored and the modules may be revised yearly if needed. In addition we have a board of advisors with professionals from the professional work field to ensure that the programme keeps on meeting the needs of the world of work.

2 International Horticulture & Management

2.1 Course Outline International Horticulture & Management 2023-2025

1st semester – period 1 + 2	Code	ECTS
Week 36, 2024 – week 5, 2025		
International Plant Production Systems In this module you will learn more about high-tech plant production systems, crop management and labour organization. Besides you will learn more about quality management and how to apply this in a company in a sustainable way. You will design a plan with international aspects and give oral and written advise. This includes professional communication with a grower, gathering and analysing data and formulate advice which are consistent with the objectives of the grower.	HPPS	13
International Strategic Innovations in Horticulture This module is designed to train students in entrepreneurship and innovative competences. Students will be taught the necessary professional skills to apply knowledge of high-tech plant production systems, financial management and strategic product- and business management. You will design a business plan with international aspects and give oral and written advise. This includes professional communication with a grower, gathering and analysing data and formulate advice which are consistent with the objectives of the grower.	HSIH	13
2nd semester: Week 9, 2024 – week 26, 2025		
(in Angers, France)		
Courses Angers + internship	HAEPt	26
1st and 2nd semester: week 36, 2024 – week 26, 2025		
Personal Development At Aeres UAS we not only focus on practical and theoretical knowledge but also on personal growth. In HPDH we will reflect on student's development and prepare students for their professional life.	HPDH	8
Second year: Week 37, 2025 – week 26, 2026		
In the fourth and last year of the International Horticulture & Management programme the student will do an company placement and write a thesis. Besides, every student will follow 2 minors in Plant Breeding or International advisor or International Farm Management (to be chosen by student) and he will finish the module Personal development.	AGWP AAFWi APL4i 2 minors	17 10 3 30
Total EC		120

2.2 Matrix of final qualifications and competences

The next matrix provides an overview of the various competences you will attain after finalizing the various modules of International Horticulture & Management.

IHCM	Year 1				
	1. HPPS	2. HSIH	3. HAEPT	4. HPDH	TOTAAL
Final Qualifications					
1. To acquire projects and give advice in the (international) agro business and food sector	X	X	X		3
2. To design and execute applied research			X		1
3. To prepare a strategic business plan		X			1
4. To purchases, develop and marketing of products and services		X			1
5. To translate and apply policies	X		X		2
6. To council and communicate on areas of cultivation and product	X		X		2
7. To manage projects, processes and people			X	X	2
8. To apply and secure quality systems within the agro chain	X				1
9. To act entrepreneurial and reflect		X		X	2
Aeres competencies					
1. To show leadership capabilities			X	X	2
2. To cooperate	X		X	X	3
3. To present	X		X	X	3
4. To research	X		X	X	3
5. To innovate		X		X	2
6. To organize			X	X	2
7. To introspect				X	1
8. To enterprise		X		X	2
9. To endorse sustainable behaviour		X	X	X	3
10. To appreciate the global perspective	X			X	2

2.3 Schedule International Horticulture & Management 2024 – 2025

week		type	Academic year 2024-2025	Activities
36	02 Sep	L0	Introduction week / start minor	
37	09 Sep	L1	Start classes	
38	16 Sep	L2		
39	23 Sep	L3		
40	30 SEP	L4		
41	07 Oct	L5		
42	14 Oct	L6		
43	23 Oct	L7		
44	28 Oct	**	Autumn break	
45	06 Nov	T1	Exams T1 + assessments	Exam period T1
46	13 Nov	T1	Exams T1 + assessments	
47	18 Nov	L1		
48	25 Nov	L2		
49	02 Dec	L3		
50	09 Dec	L4		
51	16 Dec	L5		
52	23 Dec	**	Christmas break	
01	28 Dec	**	Christmas break	
02	06 Jan	L6		
03	13 Jan	L7		
04	20 Jan	T2	Exams T2 + assessments	Exam period T2
05	27 Jan	T2	Exams T2 + assessments	
06	03 Feb	L1		
07	10Feb	L2	Sign in for resit T3	
08	17 Feb	**	Spring break / Project work	
09	24 Feb	L2		
10	03 Mar	L3		
11	10 Mar	L4		
12	17 Mar	L5		
13	24 Mar	L6		
14	31 Mar	T3	Exams T3 + resits T1 and T2	Exam period T3
15	07 Apr	T3	Exams T3 + resits T1 and T2	Exam period T3
16	14 Apr	L1	<i>(18 apr: Good Friday university closed)</i>	
17	21 Apr	L2		
18	28 Apr	**	Holidays; university closed the whole week	
19	05 May	L3		
20	12 May	L4		
21	19 May	L5		
22	26 May	L6	<i>Thursday 09 and Friday 10 May, Ascension day; university closed</i>	
23	02 June	L7		
24	09 June	L8	<i>9 June: Pentecost Monday - university closed</i>	
25	16 June	T4	Exams T4 + assessment	Exam period T4
26	23 June	T4	Exams T4 + assessment	Exam period T4
27	30 June			
28	08 July			
29/32	15 July		Summer holidays (university closed 14 July – 8 Aug)	
33	12 Aug	T5	13, 14, 15 and 16 August Resits T5	Exam Period T5
34	19 Aug	T5	19 August Resits T5	Exam Period T5
35	25 Aug			
36	01 Sep	L0	Introduction week	
37	09 Sep	L1	Start classes academic year 2025-2026	

3 Module and module descriptors

3.1 International Plant Production Systems (HPPS)

Module overview

International Plant Production Systems (HPPS)			
Coordinator:	MSM/ALJ	Credits:	13

Elements	ECTS	Name	Mode of Exam	Period	Literature
HPPS01	3	Assessment	Assessment	2	To be found in Canvas
HPPS02	2	Course High-tech Plant Production Systems	Written exam	1	To be found in study manual
HPPS03	2	Practical Training High-tech Plant Production Systems	Report (attendance compulsory)	1	To be found in study info on Canvas
HPPS04	2	Course Product quality and Postharvest	Written exam	2	To be found in Canvas
HPPS05	2	Practical training Product quality and Postharvest	Poster (compulsory attendance)	2	To be found in Canvas
HPPS06	2	Course Crop management and labour organization	Written exam	2	To be found in Canvas

Prerequisites:	Minimum of two year bachelor program in horticulture
Occupational task:	In this module you will learn more about high-tech plant production systems, crop management and labour organization. Besides you will learn more about quality management and how to apply this in a company in a sustainable way. You will design a plan with international aspects and give oral and written advise. This includes professional communication with a grower, gathering and analysing data and formulate advice which are consistent with the objectives of the grower.
Role:	Crop consultant
Working methods:	Lectures, practical trainings, excursions, assignment
Fields of knowledge:	Goals (the student):
2. Course High-tech Plant Production Systems	<ul style="list-style-type: none"> Can select the most appropriate plant production system for a given situation. Can explain the effect of (HPS of LED) assimilation lighting and greenhouse climate on crop development. Can explain the effects of different methods for fertigation and cultivation measures on crop development. Can explain how a grower can use data from crop monitoring to adjust crop development in a desired way.
3. Practical Training High-tech Plant Production Systems	<ul style="list-style-type: none"> Is able to monitor crop growth and crop development. Is able to calculate and prepare nutrient solutions for crops from liquid or solid fertilizers. Can operate automated systems for irrigation and climate management.
4. Course Product quality and Postharvest	<ul style="list-style-type: none"> Can describe in which way some companies implement quality oriented production in horticulture. Can describe the effect of different measures on postharvest product quality. Is able to analyze the factors influencing the quality of food during harvest, transport, storage and (industrial) processing.
5. Practical training Product quality and Postharvest	<ul style="list-style-type: none"> Can perform postharvest tests. Can collect and process quality data on flowers and vegetables. Can execute an audit on QMS and CSR.
6. Course Crop management and labour organization	<ul style="list-style-type: none"> Is able to prepare a labour planning. Is able to estimate labour costs. Is able to discuss with processes should be automatized. Can evaluate different aspects of corporate social responsibility which are applicable in horticulture.

Aeres competences:

- To cooperate
- To present
- To research
- To appreciate the global perspective

Final qualifications:

- 1. To acquire projects and give advice in the (international) agro business and food sector
- 5. To translate and apply policies
- 6. To council and communicate on areas of cultivation and product
- 8. To apply and secure quality systems within the agro chain

3.2 International Strategic Innovations in Horticulture (HSIH)

Module overview

International Strategic Innovations in Horticulture (HSIH)			
Coordinator:	BKW	Credits:	13

Parts	ECTS	Name	Examination	Exam in term	Literature
HSIH01	3	Assessment	Assessment	2	To be found in study info on Canvas
HSIH02	2	Course Strategic product management	Presentation	1	To be found in study info on Canvas
HSIH03	2	Course Strategic business management	Written exam	2	To be found in study info on Canvas
HSIH04	2	Course Financial management 1	Written exam	1	To be found in study info on Canvas
HSIH07	2	Course Financial management 2	Written exam	2	To be found in study manual
HSIH08	2	Course Export management and intercultural communication	Assignment	1	To be found in study manual

Prerequisites:	Minimum of two year bachelor program in horticulture
Professional task:	Design a business plan with international aspects and give oral and written advise. This includes professional communication with a grower, gathering and analysing data and formulate advice which are consistent with the objectives of the grower.
Role:	Agricultural extension officer/ Advisor/ Entrepreneur
Methods:	Lectures, practical trainings, excursion, group work
Fields of knowledge:	Goals (the student):
2. Course Strategic product management	<ul style="list-style-type: none"> Can apply innovation as a tool to improve current situation, either in technology, product or organisation. Is able to select the right product-market combinations. Can design a plan for the introduction of a new product / a product for a new market.
3. Course Strategic business management	<ul style="list-style-type: none"> Can develop a sector vision based on found historic developments and using appropriate strategic analyse techniques (e.g. DESTEP, Porter). Can design labour planning in the specific cultivations or company setting. Can explain the outline of main topics of (European) tax legislation which are important for agricultural entrepreneurs (e.g. income, turn-over- and transfer taxes). Is able to use knowledge about EU-agricultural policy in the planning of mid- and long term farm development.
4 + 7. Course Financial management 1 + 2	<ul style="list-style-type: none"> Is able to read a financial annual report of a company. Is able to analyse the financial situation of a horticultural company. Can give a substantiated judgment about the key figures of the company based on internal and external comparison and advise the entrepreneur on optimisation of this financial technical figures.
8. Course Export management and intercultural communication	<ul style="list-style-type: none"> Can explain implications of export in relation to (EU) regulations. Can map the currently applicable laws and regulations (legislation) for production. Can apply this legislation in an organisation. Can look at, analyse, and resolve problems from the perspective of cultural differences.
Aeres competences:	
<ul style="list-style-type: none"> To innovate To enterprise To endorse sustainable behaviour To appreciate the global perspective 	

Final qualifications:

- 1. To acquire projects and give advice in the (international) agro business and food sector
- 3. To prepare a strategic business plan
- 4. To purchases, develop and marketing of products and/or services
- 5. To translate and apply policies
- 9. To act entrepreneurial and reflect

3.3 Courses Angers Horticulture (HAEPt)

Module Overview

Courses Angers Horticulture (HAEPt)			
Coördinator:	TIB & J. Houlie	Credits:	26

Elements	ECTS	Name	Mode of Exam	Period	Literature
HAEPt01	4	Genetics and Crop Pathology	n.a.	June2022 (Angers)	Information by Angers
HAEPt02	1	Crop Management	n.a.	June 2022 (Angers)	Information by Angers
HAEPt03	6	Plant Breeding	n.a.	June 2022 (Angers)	Information by Angers
HAEPt04	5	Experimentation	n.a.	June 2022 (Angers)	Information by Angers
HAEPt05	10	Internship	n.a.	June 2022 (Angers)	Information by Angers

Marks delivered by Groupe ESA

Entrance requirements:	n.a.
Professional task:	Being an advisor Executing practical research Being a specialist
Role:	Advisor, researcher, specialist
Methods:	Lectures, practical training, project work
Fields of expertise:	Learning objectives (the student):
	<ul style="list-style-type: none"> Information by Angers
Aeres competencies:	
<ul style="list-style-type: none"> To show leadership capabilities To cooperate To present To research To organize To endorse sustainable behavior 	
Final qualifications:	
<ol style="list-style-type: none"> To acquire projects and give advice in the (international) agro business and food sector To design and execute applied research To translate and apply policies To council and communicate on areas of cultivation and product To manage projects, processes and people 	

3.4 International Personal Development Horticulture (HPDH)

Module Overview

International Personal Development Horticulture (HPDH)			
Coördinator:	BKW	Credits:	8

Elements	ECTS	Name	Mode of Exam	Period	Literature
HPDH01	1	Personal development	Assignment	4	To be found in Canvas
HPDH05	1	Job application training	Assignment (attendance compulsory)	1	To be found in Canvas
HPDH06	3	Preparation thesis project	Assignment	3	To be found in Canvas
HPDH07	3	Proof of proficiency	Assignment	4	To be found in Canvas

Prerequisites:	Minimum of two year bachelor programme in Horticulture
Occupational task:	Personal development
Role:	Junior professional
Working methods:	Lectures, excursions, assignments
Fields of knowledge:	Goals (the student):
Personal development	<ul style="list-style-type: none"> Is able to describe and explain his progress in relation to the Aeres competences and obtain level 2 by means of providing examples using STARR method.
Proof of proficiency	<ul style="list-style-type: none"> Is able to show in an authentic situation 5 competences on level 2.
Job application training	<ul style="list-style-type: none"> Is able to write a representative c.v. Is able to present himself well during a job interview.
Preparation thesis project	<ul style="list-style-type: none"> Is able to formulate the main research question and related sub-questions. Is able to design a research methodology that fits best the research questions. Is able to write a research project plan. Is able to collect and analyze data and to draw conclusions.
Aeres competences:	
<ul style="list-style-type: none"> To show leadership capabilities To cooperate To present To research To innovate To organize To introspect To enterprise To endorse sustainable behaviour To appreciate the global perspective 	
Final qualifications:	
<ul style="list-style-type: none"> 7. To manage projects, processes and people 9. To act entrepreneurial and reflect 	

3.5 Graduation Project (AAFWi)

Module Overview

Graduation Project (AAFWi)					
Thesis Project					
Coordinator:		MOS		Credits: 10	
Element	ECTS	Name	Mode of Exam	Period	Literature
AAFWi01	10	Thesis	Report + thesis seminar	1, 2, 3, 4	<ul style="list-style-type: none"> Jong, de, J., (2017). <i>Effective strategies for academic writing, the road towards essay, paper or thesis</i>. Bussum: Coutinho. ISBN 9789046905050 Baarda, B. (2020). <i>RThis is research</i> Groningen: Noordhoff uitgevers. ISBN: 9789001895464 <p>Suggestion for further reading:</p> <ul style="list-style-type: none"> Kumar, R. (2014). <i>Research methodology, A Step-by-Step Guide for Beginners</i>. Sage publications Ltd. ISBN: 9781446297827
Entrance requirements:		All research modules should have been completed with sufficient marks			
Professional task:		Research topic based on own choice			
Role:		Junior professional			
Methods:		Independent research			
Fields of expertise:		Learning objectives (the student):			
Based on own choice		<ul style="list-style-type: none"> Preparation for the work environment in which the student works on professional tasks. Is able to work on and show proof of 3-4 selected Aeres competencies, based on the student's own choice, on level 3 in a professional setting. 			
Aeres competencies:		Based on own choice for the graduation phase (level 3)			
Final qualifications:		Check curriculum overview and programme profile.			

3.6 Graduation Work Placement (AGWP)

Module Overview

Graduation Work Placement (AGWP)					
4th Year Work Placement					
Coordinator:		MOS		Credits: 17	
Element	ECTS	Name	Mode of Exam	Period	Literature
AGWP01	17	Graduation Work Placement	Report	1, 2, 3, 4	N/A
Entrance requirements:		None			
Professional task:		Based on own choice			
Role:		Junior professional			
Methods:		Work placement			
Fields of expertise:		Learning objectives (the student):			
Based on own choice		<ul style="list-style-type: none"> prepares for the work environment in which the student works on professional tasks gains knowledge into different company activities and job profiles is able to work on and show proof of 3 selected Aeres competencies, based on the student's own choice, on level 3 in a professional setting 			
Aeres-competencies:		Based on own choice for the graduation phase (3)			
Final Qualifications:		Check curriculum overview and programme profile.			

3.7 Personal Development (APL4i)

Module Overview

Personal development (APL4i)					
Coordinator:		TEJ		Credits: 3	
Elements	EC	Name	Exam	Period	Literature
APL4i01	1	Managing competences	Report	4	Syllabus APL4i
APL4i02	2	Professional Ethics	Class discussions & assignments	2	Syllabus APL4i
			Final report	2	
Entrance requirements:		To enter the 4 th year students should have obtained 170 ECTS credits at least, from the first three years of their studies and completed all of the personal development modules from year 1 to 3.			
Professional task:		Personal Development and self-reflection			
Role:		Junior professional			
Methods:		Training, class discussions, individual assignments.			
Fields of expertise:		Learning objectives (the student):			
Personal development		<ul style="list-style-type: none"> Reflects constantly on his or her own personal- and competency development, part of the lifelong learning paradigm. 			
Professional Ethics		<ul style="list-style-type: none"> is able to formulate an opinion on important and current aspects of the professional work environment, based on own experience and norms and values or that of others, while he or she is able to separate opinion from facts. can and is willing to openly discuss and exchange ideas with others on these kinds of topics. 			
Aeres competencies:					
<ul style="list-style-type: none"> To introspect: 8 out of 10 Aeres competencies must be at level 3 (highest level). Assessed by means of final report and meeting in which students show examples of situations where they worked on improving their competencies. The examples given are based on the goals students set at the beginning of the year and halfway through year. The examples are given using the STARR method and goals are formulated according to the SMART method. 					
Final qualifications:					
<ul style="list-style-type: none"> Management and development of own professional and personal attitude and skills Effective cooperation and communication in a multi-disciplinary, intercultural environment. 					
EED Plant:					
<ul style="list-style-type: none"> 9. To act entrepreneurial and reflect 					

4 Examination and Assessment Regulations 2023 - 2025

The current course regulations are in conformity with the *Examenregeling Aeres UAS Dronten* and they represent the distinguishing features of the international courses at Aeres UAS. All courses comply with the key study and qualification objectives of the curricula from which they stem. These qualifications are assumed in the courses, and the learning objectives presented here are only the specific ones, not what is Bachelor generic.

The course regulations are published online. Use the following link to find the regulations:
<https://www.aereshogeschool.nl/over-aeres-hogeschool/publieke-verantwoording/onderwijs-en-examenregeling>.



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