



AERES
UNIVERSITY OF
APPLIED SCIENCES
DRONTEN

Course catalogue

Major: European Engineer Degree

Livestock

Academic year 2024 - 2026, Jan van Beekhuizen

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Course	CROHO	ISCED
European Engineer Degree Livestock (EED)	34869	0811
Duration	1,5 academic year	

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1 Introduction

This course catalogue is for the **European Engineer Degree Livestock (EED) one-and-a-half-year degree programme** for the academic year of 2024-2026. Registered under the Dutch CROHO 34869 and ISCED 0811. The program is unique as it offers students who are following a bachelor study in their country to complete their study for this period in the Netherlands. This study becomes part of the final years of their bachelor degree program (business related) to receive a **Dutch bachelor degree** after completion. The program uses learning techniques such as traditional taught methods, practical assignments and case studies and internships to provide students with a unique, practical and valuable learning experience. This course catalogue provides an overview of the courses that will be taught.

The **duration of the study is 1,5 academic year (approx. 16 months)**, as students will begin in September 2024 and have a set graduation data of February 2026. The mode of study is **full-time** in a **face-to-face classroom setting**.

The **European Engineer Degree Livestock programme** offers a number of courses to create international business experts in the dairy industry. Throughout the study, courses such as **advisor International Production, International Entrepreneurship, and applied research methods are taught**. An additional benefit of the course is the ability to understand and appreciate new cultures through your study in the Netherlands and practical internships abroad. These internships are set around the international dairy industries, to provide the student with hands on experience in an international setting. Some topics within the courses include dairy genetics, nutrition and health, but also advisory training and livestock economics. Besides this there are also classes in intercultural communication, and international markets.

As the program is an international study, all courses, exams, and assessments will be delivered in **English**. Submissions from students (exams or assessments) are also required to be in English.

At Aeres University of applied science both professional and personal development are extremely important. We believe in personal education, not in numbers. Due to the nature and character of the programme, these two elements are therefore imbedded in the programme offering students in need of **academic accommodations** also a chance to become a successful young professional within the international dairy industry. EED students have to comply with **specific criteria** to be **accepted in the programme**.

The EED program is built to provide students with the knowledge and experience to establish young professionals in the food and agriculture industry. Following the completion of the course, the student will have access to jobs in small, medium and large-scale companies. Furthermore, the student will be able to use their degree to continue studying in a Master's Programme.

The remainder of this catalogue will highlight examination regulations, the year schedule, final qualifications, and the structure of the courses provided within the EED Programme.

Once you are admitted as a student at Aeres University of Applied Sciences, it is also possible to become a member of a Student association. More information can be found on the website: www.aeresuas.com

Aeres Group; corporate organisation structure

The Dutch green sector is at the forefront of the world. Aeres significantly contributes to this position. At Aeres, education, research and entrepreneurship come together around the major themes. Our talent ensures that there are people who take responsibility for the sustainable growth of plants and animals, feeding people, creating a healthy environment and giving room to nature. (Aeres, 2021).

Aeres was created between 2004 and 2009 from mergers of the former Groenhorst College, the CAH University of Applied Sciences, Stoas University of Applied Sciences and PTC+ (now Aeres Tech and Aeres Training Centre). In 2013, the CAH and Stoas merged to form Vilentum University of Applied Sciences, thereby founding the three current Aeres University of Applied Sciences faculties in Dronten, Almere and Wageningen. Aeres provides education (pre-vocational secondary education, TVET, Bachelor and Master) and is also active in the field of applied research and innovation and commercial courses and services for individuals and businesses (Aeres, 2021).

Aeres Group Executive Board of directors consists of: Mr B.M.P. Pellikaan (chairman), Mrs I.D. Dulfer-Kooijman (member), Mr M.H.C. Komen (member) [INFO](#)

2 Competency Based Education & Final Qualifications

Aeres has chosen to work with competency based education in all its programmes. Competencies are identified behaviours, knowledge, skills, and abilities that directly and positively impact the success of employees and organizations. Competencies can be objectively measured, enhanced, and improved through coaching and learning opportunities. Throughout the programme students work on the 10 Aeres competencies, please check appendix 4 Competency scorecard including levels and criteria.

2.1 Aeres Competencies

- 1. To show leadership**
Coaches the development of employees and shows exemplary behaviour; retains overview in complex situations, takes initiative at key strategic moments to administer processes of change and applies an appropriate leadership style.
- 2. To cooperate**
Creates a good atmosphere, handles the interests of others with care, is able to conquer resistance and conflict and utilizes the qualities of all individual team members to collectively reach the predetermined goals.
- 3. To present**
Is able to communicate messages about complex topics in an understandable and persuasive manner to a critical target audience, thereby consciously choosing the most effective form of communication.
- 4. To research**
Is able to recognise and describe a problem or development, is able to formulate the practical research inquiry and is able to supply a solution using the appropriate research methods.
- 5. To innovate**
Uses creativity to develop new products, services and applications that are of use in practice.
- 6. To organise**
Plans and executes activities, brings both employees and resources effectively into action, supervises progress, adjusts when necessary and achieves the desired results.
- 7. To reflect/ to introspect**
Is able to assess and adjust development to ensure that own performance and the work environment are in keeping with each other.
- 8. To enterprise**
Is able to see opportunities and is able to achieve the desired results by taking risks.
- 9. To endorse sustainable behaviour**
Is responsible for the respectful treatment and sustainability of available sources, taking into account moral standards.
- 10. To appreciate the global perspective**
Sees the whole world as a work field and is able to operate in an international environment.

In the Bachelor programmes Aeres offers, there are 3 levels defined for these competencies: Propaedeutic phase, Main phase and Graduation phase. Graduating students must have obtained 8 out of 10 of these competencies at the Graduation phase level and be able to prove this.

The students will be coached throughout their study on personal development. This is registered as the course element CMP. Each student gets a personal coach who will be there to guide the student through their studies and support students in the process of getting to the requested competency level. After successfully having finished all educational activities by the end of this year, the student will need to prove by means of their portfolio that he or she masters the **10 Aeres competencies at Graduation phase level**.

2.2 Final Qualifications

In order to guarantee that all bachelor programmes in the livestock business reach the same national set objectives developed, the four 'green' oriented Higher Educational Institutions have developed 10 final qualifications for bachelor programmes with CROHO registration number 34869 in cooperation with the agri-food business professional environment in which our graduates will work.

1. To know the current developments in the agri-food sector
2. Developing a vision and strategy for an (international) agri-food business
3. Entrepreneurship and innovation in the international agri-food business.
4. Setting up and implementing an applied business research in the agri-food business
5. Management of organizations, processes, projects and people.
6. Effective cooperation and communication in a multi-disciplinary, intercultural environment.
7. Management and development of own professional and personal attitude and skills
8. Advise on financial aspects of business management of an agri-food company.
9. Optimising logistics and monitoring quality of agri-food chains
10. Strategic marketing of products and services in the global agri-food market

2.3 Matrix of competences and minors

The next matrix provides an overview of the various competences you will attain after finalizing the various minors of European Engineer Degree Livestock course.

2.4 Examination and Assessment Regulations 2024-2025.

The current course regulations are in conformity with the Examenregeling Aeres UAS 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 Examination Regulations for International Courses will be presented to students in a separate document at the beginning of the academic year 2024-2025

EED	HADP/HAPI/HAPO	AIES	APL4i	ALRD	HEAN	AECPL	AETHS	TOTAAL
	Final qualifications							
1. To analyse and optimise a livestock farm in relation to the environment of the farm	X	X			X			3
2. To overview the international sector		X						1
3. To acquire projects and give advice	X	X			X			3
4. To design and execute applied research	X		X	X	X			4
5. To develop a strategic plan		X						1
6. To develop products and services and find markets for these products and services		X	X	X	X			4
7. To translate and apply policy		X						1
8. To inform specific target groups in an interactive way	X	X	X	X	X			5
9. To manage projects, processes and people		X	X	X	X			4
10. To apply quality systems								0
11. To show corporate social responsibility and introspect	X	X	X		X			4
Aeres competences								
1. To show leadership capabilities		X			X			2
2. To cooperate	X	X	X		X			4
3. To present	X	X			X			3
4. To research	X			X	X			3
5. To innovate	X	X		X				3
6. To organize	X	X		X	X			4
7. To introspect			X	X				2
8. To enterprise	X	X						2
9. To endorse sustainable behavior	X	X		X	X			4
10. To appreciate the global perspective		X	X					2

3 Educational Examination Regulations

3.1 Student Contract

Each student will have a student contract that indicates the individual study path of the student for that academic year. The study contract also expresses specific conditions that would have to be met at a given date during the academic year. The student contract can be regarded as a supplement to the Educational Exam Regulations and is registered in the Student Administration System (Osiris).

3.2 Student Charter and Code of Conduct

This student charter has been drawn up on the basis of the provisions of Article 7.59 of the Higher Education and Scientific Research Act (WHW). This charter contains the rights and obligations of students enrolled at Aeres University of Applied Sciences.

By recording the rights and obligations of students in a student charter, students can easily gain a full insight into their legal position. In addition to establishing rights and obligations that relate to the personal interest of the student, the charter also contains regulations (code of conduct) that aim to ensure that the student behaves according to the outlined norms/values and rules and regulation of studying in this academic environment. The Aeres UAS student charter and the code of conduct apply to all students of the (International) Bachelor's programs of Aeres UAS, that include students who are here on an exchange programme or as part of their own study programme. or Dalhousie students taking their second year at Aeres UAS as part of the IFB programme.

3.3 Examination Regulations

The Educational Exam Regulations as given here are published online as part of the Student charter. This can be found on intranet website, select "English" as a language and thereafter select the button "Student charter". Students are expected to know where to find and understand the content of the examination regulations. Although we explain the examination regulations during the introduction week and throughout the year by your personal coach and programme coordinator, students have a responsibility in reading these documents. <https://www.aereshogeschool.nl/over-aeres-hogeschool/publieke-verantwoording/onderwijs-en-examenregeling>

3.4 Academic Accommodations

Academic accommodations are put into place to reduce or eliminate a disadvantage as a result of their physical or mental condition. Students receiving academic accommodation are still expected to meet the requirements of the programme. Academic accommodations vary per student and are individually assessed and awarded provided that the student handed in official documentation to the academic accommodations coordinator (decaan) before the start of any examination period.

The academic accommodations coordinator will officially put academic accommodations in to place for those students who experience a barrier related to physical or mental condition, when:

- The intake has taken place with the academic accommodations officer
- the documentation is in order and states that the student has a disability/ condition and requires accommodations,
- the academic accommodations officer has given his or her official approval.

Students are responsible for academic accommodations at all times, parents/ guardians are only informed with written consent of the student. Students who experience the following conditions are eligible for academic accommodations:

- Learning disability (i.e. dyslexia, dyscalculia)
- Sensory impairment (i.e. hearing loss, blindness, low vision)
- Mobility

3.5 Student Counsellors

Student welfare is of great importance in order to succeed academically. Sometimes “life happens when you are busy making other plans” or you have or are still experiencing difficulties, problems, harassment and so on. If you cannot talk to your personal coach or this exceeds their ability to help you can contact yourself or we advise you to contact one of our student counsellors. These staff members are especially appointed and trained to work on problems with you, confidentially. Nothing you say to them will be shared with anybody.

In the event of undesirable behavior by others, a complaint can be submitted to the Complaints Committee together with the student counsellor. The latter then investigates the complaint and action can then be taken in short term. The student counsellor can also function as a liaison between you and others for other social-emotional problems.

The student counsellors can be reached by email, telephone, appointment or by walk-ins. If you prefer to make an appointment for a place outside the school, you can. If you experience problems and they exceed your personal coaches responsibilities and abilities, please contact our counsellors. Do not wait too long and contact us! Please remember that we cannot help if we do not know what is going on. We realise it can be extremely difficult to take the first step but we can are here to help. And will be there with you every step of the way.

Jan Pesman

Email: j.pesman@aeres.nl

Telephone number: 088-020 5890

Room number: P 2.10

Titia van Duinen-Rozema

Email: t.van.duinen@aeres.nl

Telephone number: 088-020 5781

Room number: F 2.31

Dean and Studying with a disability:

Elly van Putten-Travaille

Email: e.van.putten@aeres.nl

Telephone number: 088-020 5898

Room number: F 2.34

4 Course Outline European Engineer Degree Livestock 2024-2026

The schedule below shows the outline of the program.

1 st semester	Week 36 2024– week 3 2025		EC
	<p>Advisor livestock Production In this module the student will learn how to act as a consultant or advisor in the livestock sector. This includes communication with farmers, gathering farm data, analysing this data and the formulation of advices that are consistent with the objectives of the farmer. The student will write an advisory report and present this in an advisory meeting to the farmer. Depending on their focus the student will follow a course on dairy, pig or poultry production.</p> <p>For a solid background in giving advice, students will get classes about nutrition, genetics, animal health and feed production. Next to that students will have practical training in giving advice to farmers.</p>	HADP/ HAPO/ HAPI	13
	<p>International Entrepreneurship Due to all kind of reasons including an international environment, decisions that farmers have to make are becoming increasingly complex. Therefore modern entrepreneurs and their consultants need the right competencies to develop ideas and calculate the economic effects of operational, tactical and strategic options they have in mind for their farm or their client. In this module the student will learn to develop new ideas, explore the possibilities for improvement of farm management and develop new ideas for farm development.</p> <p>The student will write an strategic advisory report and present this in an advisory meeting to the farmer.</p> <p>Students will have classes about: farm economics, strategic management, marketing and sales, world agricultural policy, HRM and international dairy production.</p>	AIES	13
	<p>Applied research This short course is a preparation on the internship and graduation project. During the graduation period students are doing research on curtain themes. In order to know how to do research in a more scientific way students are following some courses on research methods and statistics.</p>	ALRD	8
1 st & 2 nd semester	<p>Personal Development At Aeres UAS we're not only focussing on practical and theoretical knowledge, but also on personal growth. In APL4L we will reflect on student's development an prepare students for their professional life.</p> <p>A student graduating from Aeres must be able to conduct independent academic research. Conducting research requires specific research skills. In this skills training course attention will be given to a process of setting up the research, data analysis and presentation of the research findings.</p>	APL4iL	3
2 nd semester	March 2024 – June 2025		
	<p>Course HEAN in Angers During this period students will follow courses at ESA, Agricultural university of Angers in France</p>	HEAN	23
1 st semester	July 2025 – January 2026		
	Company placement	AEGWP	20

	<p>To meet the objectives, it is necessary that the student has an opportunity to become familiar with the day to day activities in an organisation or company. After a period of specific coaching, a task is set in which he or she has to work with a certain degree of individual responsibility. The level of the task should be adapted to the educational background of the student, and, if possible, to the chosen specialisation.</p> <p>First and foremost, the students should be aware of all the facets of the training assignment, and become familiar with the demands made, from the formulation of the problem up to and including to its solution, and its implementation in practice. Consequently, the best method of coaching is by the relevant expert in the organisation or company. This involves the two most important parties in the placement.</p> <p>The contents of the placement will differ widely, according to the company and the student's preferences. The contents of the training programme are the result of discussions between the company, the student and the college. The opportunity for the student to collect and consult literature and other sources of information on the training subject matter is an essential ingredient for a successful learning experience.</p>		
	<p>Thesis The thesis consists of:</p> <ul style="list-style-type: none"> • executing an assignment (agriculture-related research, problem-solving, developing a new technique, market research, organisational research and others) related to the present or future practice; • writing a report in which the results of the assignment are joined with the results of literature survey or a desk study, combining into a thoroughly documented and well-founded set of conclusions and recommendations; • organising and presenting a seminar on the methodology of the research and the results, emphasising the value and the applicability in professional practice. <p>The emphasis in the assignment is on improving the problem-solving capacity: it is the final element for all-out training by problem identification, critical analysis and approach, development of well-worked out solutions and achieving a balance between practical orientation and theory. The time allocated allows these elements.</p>	AETHS	10
	Total EC		90

4.1 Schedule European Engineer Degree Livestock

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	

5 Module descriptors

5.1 Advisory Livestock Production

Depending on the field of interest the student will follow the course dairy production (HADP), poultry production (HAPO) or pig production (HAPI).

5.1.1 Module orientation

In European countries such as The Netherlands, Livestock production is under increasing pressure. On the one hand it is necessary to meet the demands of a more and more sophisticated market in livestock products. On the other hand there are social and legal pressures to protect and promote environmental quality. To meet these sophisticated market changes it is important that companies and organizations develop strong strategies to ensure a livestock production who can deal with these circumstances it is necessary to optimize production, but being aware of public pressure. In this course students are trained to advice farmers to develop their farm in a sophisticated way.

The course Advisor Dairy Production enables the student to gain deeper understanding of what is necessary to optimize a dairy farm. Professional areas of competence include genetics, nutrition, roughage production and dairy health. To understand how to react on certain circumstances and how to deal with farmers you will also get an advisory training.

You are expected to work as a professional (junior) consultant to solve bottle necks on a dairy. In order to give good advice it is important to focus on the following activities.

Analysis of the problems

- Development of possible alternative solutions
- Choice of best option
- Write a professional advisory report about improvement process
- Present your solution in a convincing way

5.1.2 Module overviews

Advisor Dairy Production (HADP)					
Advisor Dairy Production					
Coordinator:	Arthanja Verweij (VWA)			Credits:	13
Elements	ECTS	Name	Mode of Exam	Period	Literature
HADP01	4	Assessment and learning tasks	Assessment	2	Learning guide + info in Canvas
HADP02	2	Dairy Genetics	Written exam	2	Sheets and provided articles
HADP03	2	Dairy Nutrition	Written exam	1	Penn State Extension, From Harvest to Feed: Understanding Silage Management (available online) NRC, 2001. Nutrient Requirements of Dairy Cattle 7 th revised edition (available online) Lecture notes/slides
HADP05	2	Roughage Production	Written exam	1	Sheets and provided articles online book: https://www.encyclopediapratensis.eu/a-syllabus-for-young-farmers/
HADP06	1	Advisory training	Training	2	
HADP07	2	Dairy Health	Computer exam	1	Brand, A, J.P.T.M. Noordhuizen and Y. Schukken; Herd health and production management control, 2001. ISBN13: 789074134347 Hulsen, J. and Klein Swormink. B; From calf to heifer, 2006, ISBN 9789075280951

Entrance requirements	Basic knowledge about dairy production and management
Professional task	In this module the student will learn how to act as a consultant or advisor. This includes communication with farmers, gathering data, analysing data and formulation of advices that are consistent with the objectives of the farmer. The student will write an advisory report and present this in an advisory meeting to the farmer.
Role:	Advisor/consultant
Methods:	Learning tasks, classes, practical training and farm visits
Fields of expertise	Objectives (the student):
HADP01 Assessment and learning tasks	<ul style="list-style-type: none"> • Is able to develop a quick-scan and advisory report • Is able to give a written and oral advice about tactical management.
HADP02 Dairy Genetics	<ul style="list-style-type: none"> • Is able to analyse a dairy farm and advice farmers about their genetic plans • Is able to predict the effect of breeding decisions • Is able to explain the application of genomic selection • Is able to calculate the heritability of traits and reliability of breeding values • Is able to explain the effects of inbreeding and cross breeding
HADP03 Dairy Nutrition	<ul style="list-style-type: none"> • Is able to analyze a dairy farm and advise farmers about animal nutrition. • Is able to determine the factors influencing the appropriate preservation of feed stuffs. • Is able to explain the relation between feedstuffs and digestibility, feed intake, animal health and production. • Is able to explain the metabolic transition from feed into animal products. • Is able to evaluate feedstuffs and their nutritional value related to utilization by the animal. • Is able to critically analyze the ration of different animal categories. • Is able to explain relation between animal nutrition and nutrition related diseases. • Is able to explain the relation between animal nutrition and environmental impact.
HADP05 Roughage Production	<ul style="list-style-type: none"> • Have knowledge about growth and development of grass, grassland and grassland types • Have knowledge of determination of grass species, and knowledge of breeds and mixtures • Have knowledge of grazing and planning in grassland use • Have knowledge of corn and fodder crops • Have knowledge about roughage production and climate • Have knowledge of the basic principles of fertilization and fertilization advice by manure or chemical fertilizer for grassland and fodder crops • Calculate fertilization advices for different parcels (soils) and fodder crops (all) • Have knowledge about effect of N fertilization on harvest (quantity), forage quality, financial results and efficiency of mineral use • Have knowledge about fertilization minerals and trace minerals and recognize possible shortages in plant (and what is the effect of shortages)
HADP06 Advisory training	<ul style="list-style-type: none"> • Is able to give an oral advise to a dairy farmer using appropriate advisory techniques • Is able to give a farmer specific advice
HADP07 Dairy Health	<ul style="list-style-type: none"> • Is able to analyse a dairy farm on factors responsible for the occurrence of farm related diseases and advice on preventive measures. • Is able to analyse a dairy farm on factors responsible for the occurrence of infectious and parasitic diseases and advice on preventive measures. • Is able to explain the mechanism of antibiotic resistance and advice on measures to reduce the use of antibiotics
Aeres competencies:	
To cooperate, to present, to research, to innovate, to organise, to enterprise, to endorse sustainable behaviour	
Final Qualifications:	
<ul style="list-style-type: none"> • To analyse and optimise a livestock farm in relation to the environment of the farm • To acquire projects and give advice • To design and execute applied research • To inform specific target groups in an interactive way • To show corporate social responsibility and introspect 	

Advisor Poultry Production (HAPO)

Coördinator:	Miranda Elling-Staats (EIM)	Credits:	13
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Elements	ECTS	Name	Mode of Exam	Period	Literature
HAPO03	2	Poultry Nutrition	Written exam	1	E-learning
HAPO04	2	Poultry Health	Written exam	1	E-learning
HAPO07	1	Advisory skills	Oral exam	2	
HAPO08	2	Current issues	Written exam	2	
HAPO10	2	Poultry Genetics and breeding	Written exam	2	Sylabus Poultry genetics
HAPO11	3	Assessment and learning tasks	Assessment	2	
HAPO13	1	Advanced incubation practise	Written exam	1	Roodbont Hatchery signals

Entrance requirements	Basic knowledge about poultry production and management
Professional task	In this module the student will learn how to act as a consultant or adviser. This includes communication with farmers, gathering data, analysing data and formulation of advices that are consistent with the objectives of the farmer. The student will write an advisory report and present this in an advisory meeting to the farmer.
Role:	Advisor/consultant
Methods:	Learning tasks, classes, practical training and farm visits
Fields of expertise	Objectives (the student):
HAPO011 Learning tasks and assessment	<ul style="list-style-type: none"> • develop a quick-scan and advisory report • give a written and oral advice about tactical management.
HAPO010 Poultry genetics and breeding	<ul style="list-style-type: none"> • analyse a poultry farm and advice farmers about their genetic plans • predict the effect of breeding decisions • explain the application of genomic selection • calculate the heritability of traits and reliability of breeding values • explain the effects of inbreeding and cross breeding • pinpoint critical points in sow reproduction and prepare advise • assess the quality of the breeding management
HAPO03 Poultry Nutrition	<ul style="list-style-type: none"> • analyse a poultry farm and advice farmers about animal nutrition • explain the relation between feedstuffs and digestibility, feed intake, animal health and production • explain the metabolic transition from feed into animal products • evaluate feed stuffs and their nutritional value related to utilization by the animal • critically analyse the ration of different animal categories • explain relation between animal nutrition and nutrition related diseases
HAPO04 Poultry Health	<ul style="list-style-type: none"> • analyse a poultry farm on factors responsible for the occurrence of farm related diseases and advice on preventive measures. • analyse a poultry farm on factors responsible for the occurrence of infectious and parasitic diseases and advice on preventive measures. • explain the mechanism of antibiotic resistance and advice on measures to reduce the use of antibiotics
HAPO08 Current Issues	<ul style="list-style-type: none"> • explain recent global developments in the poultry sector • discuss current issues in the poultry sector with stakeholders • judge the feasibility of innovations in the poultry sector
HAPO07 Advisory skills	<ul style="list-style-type: none"> • give an oral advise to a poultry farmer using appropriate advisory techniques • perform the practical skills to manage a poultry farm
HAPO013 Advanced incubation practise	<ul style="list-style-type: none"> • describe factors that influence fertility, hatchability and chick quality • calculate the ventilation of incubators based on egg weight loss and fertility • describe the (dis)advantages of different farm hatching systems and early feeding • make and interpret the results of a hatching egg break-out
Aeres competencies:	
To present, to research, to endorse sustainable behaviour	
Final Qualifications:	
<ol style="list-style-type: none"> 1. Specialist in animal and/or livestock farming 2. Optimising a business in the animal and/or livestock sector 3. Research in the animal and/or livestock sector 4. Advising in the animal and/or livestock sector 	

Advisor Pig Production (HAPI)			
Advisor Pig Production			
Coordinator:	Marrit van Engen (ENM)	Credits:	13

Module elements	EC	Name	Exam	Period	Literature
HAPI02	2	Pig Genetics and breeding	Written exam	2	
HAPI03	2	Pig Nutrition	Written exam	2	
HAPI04	2	Pig Health	Written exam	1	
HAPI05	2	Current issues	Written exam	1	
HAPI07	2	Advisory skills	Practical exam	2	
HAPI08	3	Assessment and learning tasks	Assessment	2	

Practical training at University farm related to different module elements (02-05)

Entrance requirements	Basic knowledge about pig production and management
Professional task	In this module the student will learn how to act as a consultant or adviser. This includes communication with farmers, gathering data, analysing data and formulation of advices that are consistent with the objectives of the farmer. The student will write an advisory report and present this in an advisory meeting to the farmer.
Role:	Advisor/consultant
Methods:	Learning tasks, classes, practical training and farm visits
Fields of expertise	Objectives (the student):
HAPI01 Learning tasks and assessment	<ul style="list-style-type: none"> develop a quick-scan and advisory report give a written and oral advice about tactical management.
HAPI02 Pig Genetics and breeding	<ul style="list-style-type: none"> analyse a pig farm and advice farmers about their genetic plans predict the effect of breeding decisions explain the application of genomic selection calculate the heritability of traits and reliability of breeding values explain the effects of inbreeding and cross breeding pinpoint critical points in sow reproduction and prepare advise assess the quality of the breeding management
HAPI03 Pig Nutrition	<ul style="list-style-type: none"> analyse a pig farm and advice farmers about animal nutrition explain the relation between feedstuffs and digestibility, feed intake, animal health and production explain the metabolic transition from feed into animal products evaluate feed stuffs and their nutritional value related to utilization by the animal critically analyse the ration of different animal categories explain relation between animal nutrition and nutrition related diseases
HAPI04 Pig Health	<ul style="list-style-type: none"> analyse a pig farm on factors responsible for the occurrence of farm related diseases and advice on preventive measures. analyse a pig farm on factors responsible for the occurrence of infectious and parasitic diseases and advice on preventive measures. explain the mechanism of antibiotic resistance and advice on measures to reduce the use of antibiotics
HAPI05 Current Issues	<ul style="list-style-type: none"> explain recent global developments in the pig sector discuss current issues in the pig sector with stakeholders judge the feasibility of innovations in the pig sector
HAPI07 Advisory skills	<ul style="list-style-type: none"> give an oral advise to a pig farmer using appropriate advisory techniques perform the practical skills to manage a pig farm
Aeres competencies:	
To cooperate, To present, to research, to innovate, to organise, to enterprise, to endorse sustainable behaviour	
Final Qualifications:	
<ul style="list-style-type: none"> To analyse and optimise a livestock farm in relation to the environment of the farm To acquire projects and give advice To design and execute applied research To inform specific target groups in an interactive way To show corporate social responsibility and introspect 	

5.2 International Entrepreneurship (AIES)

5.2.1 Module orientation

Today's businesses are facing globalized markets, which offer provide both threats and opportunities throughout various industries. The ability to move into new markets, offers businesses the opportunity to grow. To make sure this growth strategy is successful, the company must use the right strategy. This course will focus on training knowledge and skills, through theory and practice, to ensure students understand how to approach global markets. The course will have to main focuses on farm economics. International developments, Strategic choices, Regulations, Marketing and other aspects of knowledge will be provided through theory, and will be put to practice through different scenarios.

5.2.2 Module overview

International Entrepreneurship (AIES)			
International Entrepreneurship (for international students only)			
Coordinator:	Jan van Beekhuizen (BKJ)	Credits:	13

Module elements	EC	Name	Exam	Period	Literature
AIES01	3	Business plan and oral advice during consultancy meeting	Assessment	2	<ul style="list-style-type: none"> Learning guide + ppt+ info Canvas
AIES02	2	Farm economics	Written exam	1	<ul style="list-style-type: none"> Brouwers, M.P. & W. Koetzier; The basics of financial management Noordhoff, Third edition, 2015 ISBN10: 9789001839147
AIES03	2	International Livestock production and Strategic Management	Assignment	1	Info teacher / ppt / Canvas
AIES04	2	Marketing and Sales training	Assessment	2	<ul style="list-style-type: none"> Blythe, J.; Essentials of marketing, 5th edition, 2012 ISBN 9780273757689
AIES05	2	World agricultural policy	Written exam	2	<ul style="list-style-type: none"> McCormick, J.: Understanding the European Union, 2017. ISBN 9781137607751
AIES06	2	Human Resource Management and Consultancy skills	Assignment	1	<ul style="list-style-type: none"> Info teacher / ppt / Canvas

Entrance requirements	Basic knowledge about poultry production and management
Professional task	<p>In this module the student:</p> <ul style="list-style-type: none"> will learn how to act as an adviser or entrepreneur in an international environment. Will develop and write a marketing plan and execute a sales talk Will write a strategic advisory report (business plan) and present this in an advisory meeting to the farmer (part 2). <p>This includes professional communication with farmers, gathering and analysing data and formulate advice which are consistent with the objectives of the farmer.</p>
Role:	Advisor/Entrepreneur/Account manager
Methods:	assignments, classes, practical training and farm visits
Fields of expertise	Objectives (the student):
AIES01	<ul style="list-style-type: none"> Is able to analyse financial and technical data of a poultry farm out of actual year reports Is able to develop a strategic business plan

	<ul style="list-style-type: none"> • Is able to give a written and oral advice about strategical farm management.
AIES02	<ul style="list-style-type: none"> • Is able to read and understand a financial year report of a farm • Is able to analyse the financial situation of a livestock production farm. • Is able to advise farmers about farm development based on key process indicators (KPI)
AIES03	<ul style="list-style-type: none"> • Is able to analyse and explain worldwide developments in the livestock production sector • Is able to develop a sector vision based on found historic developments and using appropriate strategic analyse techniques
AIES04	<ul style="list-style-type: none"> • Is able to write a marketing plan and perform a sales talk
AIES05	<ul style="list-style-type: none"> • Is able to use knowledge about EU-agricultural policy in the planning of mid and long term farm development
AIES06	<ul style="list-style-type: none"> • Is able to plan and manage human resources on animal production farms • Develop advisory skills, and is herewith able to give advice to agricultural entrepreneurs
Aeres competencies	
To show leadership capabilities, to cooperate, to present, to innovate, to organise, to enterprise, to endorse sustainable behaviour, to appreciate the global perspective	
Final Qualifications:	
<ul style="list-style-type: none"> • To analyse and optimise a poultry farm in relation to the actual environmental and social developments • To overview the international poultry sector • To develop a strategic business plan • To develop products and services and find markets for these products and services • To translate and apply actual legislation and political developments into the farm management and strategy • To inform and give advice to farmers and specific target groups in an interactive way • To manage and/or give advice about poultry processes and people in the agricultural production sector • To show corporate social responsibility and introspect 	

5.3 Applied Research (ALRD)

5.3.1 Module Orientation

This short course is a preparation on the internship and graduation project. During the graduation period students are doing research on certain themes. In order to know how to do research in a more scientific way students are following some courses on research methods and statistics.

5.3.2 Module overview

Applied Research (ALRD)			
Coordinator:	Daan Westrik (WED)	credits:	8

Elements	ECTS	Name	Mode of Exam	Period	Literature
ALRD01	4	Learning tasks and assessment – research	Assessment	3	Learning guide + info Canvas
ALRD02	2	Statistics (including use of SPSS)	Training (assessed as part of the assessment).	3	Check learning guide + info Canvas
ALRD03	2	Research methods	Written Exam	2	Jong, de J., 2017, Effective strategies for academic writing, Coutinho, Bussum, ISBN: 978 90 469 0505 0 Baarda, B., 2014, Research. This is it!, Noordhoff Uitgevers B.V., ISBN: 9789001816964

Entrance requirements:	Basic knowledge about animal husbandry
Professional task:	Developing a research protocol, data collection and analysis, reporting about research results
Role:	Researcher
Methods:	Learning tasks, classes, training, excursions /company visits
Fields of expertise:	Learning objectives (the student):
ALRD01	<ul style="list-style-type: none"> Is able to collect research data and information Is able to make a critical analysis of scientific papers Is able to develop a research project plan including a protocol Is able to analyse data and draw conclusions Is able to report about research results applicable for the target group
ALRD02	<ul style="list-style-type: none"> Is able to determine different types of variables (qualitative/quantitative, dependent/independent) Is able to formulate hypotheses Is able to analyse data using the appropriate statistical method Is able to draw conclusions using the outcome of statistical analysis
ALRD03	<ul style="list-style-type: none"> Is able to justify the relevance of a research topic Is able to formulate the main research question and related sub-questions Is able to design a research methodology that fits best the research question(s) Is able to write a research project plan
Aeres competencies	
To Research, To organise, To Introspect,	
Final qualifications:	
<ul style="list-style-type: none"> To design and execute applied research To develop products and services and find markets for these products and services To inform specific target groups in an interactive way To manage projects, processes and people 	

5.4 European Engineer Degree Livestock and Personal Development (APL4i)

5.4.1 Module orientation

Competence development is of the essence. Throughout the study year coaching activities take place to guide the student to strengthen his/her competences, based on the student personal needs and progress development.

A student graduating from Aeres must be able to conduct independent academic research. Conducting research requires specific research skills. In this skills training course attention will be given to a process of setting up the research, data analysis and presentation of the research findings.

5.4.2 Module overview

Personal development (APL4i)					
Coordinator:		Jantien Tempert (TEJ)		Credits: 3	
Elements	EC	Name	Exam	Period	Literature
APL4i01	1	Managing competences	Report (O/V/G)	4	Syllabus APL4i
APL4i02	2	Professional Ethics	Class discussions & assignments	1 4	Syllabus APL4i
			Final report	1 4	
Entrance requirements:		To enter the 4 th year students should have obtained 165 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:					
<p>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</p>					
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 					

5.5 Courses Angers (HEAN)

During the second semester students of this program will follow courses in Angers. After finishing these courses students can start their internships.

Courses Angers (HEAN)			
Coordinator:	Justine Defois (ESA) Jantien Tempert	credits:	23

Module elements	ECTS	Name	Mode of Exam	Exam in Period	Literature
HEAN01	7	Project management	n.a.	June 2023 (Angers)	Information by Angers
HEAN02	9	Agricultural Advice	n.a.	June 2023 (Angers)	Information by Angers
HEAN03	7	Production Management & Technology	n.a.	June 2023 (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"> N.A.
Final qualifications:	
	<ul style="list-style-type: none"> N.A.

5.6 Company Placement (AEGWP)

5.6.1 Module orientation

To meet the objectives, it is necessary that the student has an opportunity to become familiar with the day to day activities in an organisation or company. After a period of specific coaching, a task is set in which he/she has to work with a certain degree of individual responsibility. The level of the task should be adapted to the educational background of the student, and, if possible, to the chosen specialisation.

First and foremost, students should be aware of all the facets of the training assignment, and become familiar with the demands made, from the formulation of the problem up to and including its solution, and its implementation in practice. Consequently, the best method of coaching is by the relevant expert in the organisation or company. This involves the two most important parties in the placement.

The contents of the placement will differ widely, according to the company and the student's preferences. The contents of the training programme are the result of discussions between the company, the student and the college. The opportunity for the student to collect and consult literature and other sources of information on the training subject matter is an essential ingredient for a successful learning experience. The duration of this period is at least 12 weeks.

5.6.2 Module overview

Graduation Work Placement (AEGWP)					
Graduation Work Placement					
Coordinator:		Jantien Tempert (TEJ)		Credits: 20	
Element	ECTS	Name	Mode of Exam	Period	Literature
AEGWP01	20	EED Graduation Work Placement	Report	1,2,3,4	Work Placement Manual (available on Canvas)
Entrance requirements:		First semester and first part of second semester of current Aeres educational year.			
Professional task:		The EED graduation work placement is adapted to the chosen profile of the students, in this case management in the agrifood chain, (agri)business consultancy or research institutes. The activities as performed by the student during the work placement are in line with the chosen study programme. In the placement the student is expected to operate as a young professional within a job profile that matches the programme the student is in.			
Role:		Advisor, entrepreneur, researcher, junior project manager			
Methods:		Depending on the type of the placement			
Fields of expertise:		Learning objectives (the student):			
Based on own choice		<ul style="list-style-type: none"> obtains insight into the operational practice of the placement company, and into the place of the company in its environment. carries out a practical assignment, in a self-responsible manner. This implies that placement coaching by the company will have the characteristics of general supervision. effectively applies current methods of research methodology and interpretation techniques. obtains insight into relevant professional activities and the accompanying requirements for Higher Education graduates, as formulated by the company and its environment. 'Relevant' means relevant to the course of which the placement is a part. demonstrates that he/she is proficient in a number of professional skills and competencies, as required in the course programme the student can adapt or reformulate study goals on the basis of experiences in the training period. The student conforms to these individual learning goals, set either in advance or during the training period 			
Assessment:					
<ol style="list-style-type: none"> Assessment by the training company (company coach) as an indicator Assessment by the Professional University (university coach), based on: <ul style="list-style-type: none"> the in-company days the three weekly reports the final placement report 					
Aeres-competencies:					
To be chosen by the student					
Final Qualifications:					
Free, depending on the assignment					

5.7 Thesis (AAFwi)

5.7.1 Module orientation

The thesis consists of:

- executing an assignment (agriculture-related research, problem-solving, developing a new technique, market research, organisational research and others) related to the present or future practice;
- writing a report in which the results of the assignment are joined with the results of literature survey or a desk study, combining into a thoroughly documented and well-founded set of conclusions and recommendations;
- organising and presenting a seminar on the methodology of the research and the results, emphasising the value and the applicability in professional practice.

The emphasis in the assignment is on improving the problem solving capacity: it is the final element for all-out training by problem identification, critical analysis and approach, development of well-worked out solutions and achieving a balance between practical orientation and theory. The time allocated allows these elements.

5.7.2 Module overview

Graduation Project (AAFWi)					
Graduation Project					
Coordinator:		AKC		Credits: 10	
Element	ECTS	Name	Mode of Exam	Period	Literature
AAFWi01	10	Thesis	Research report & colloquium	1234	<ul style="list-style-type: none"> Jong, de, J., (2017). Effective strategies for academic writing, the road towards essay, paper or thesis. Bussum: Coutinho. ISBN 9789046905050 Baarda, B. (2020). This is research. Noordhoff uitgevers. ISBN: 9789001895464 Suggestions for further reading: <ul style="list-style-type: none"> Kumar, R. (2014). Research methodology, A Step-by-Step Guide for Beginners. Sage publications Ltd. ISBN: 9781446297827 Saunders, M. N. K. (2019). Research methods for business students (8th edition). Pearson Education Limited
Entrance requirements:		All research modules should have been completed with sufficient marks			
Professional task:		Research topic based on own choice. Conducting research, writing a research report and presenting the research and its outcomes during a colloquium			
Role:		Researcher			
Methods:		Independently working on a research project with guidance of thesis coach			
Fields of expertise:		Learning objectives (the student):			
Based on own choice		<ul style="list-style-type: none"> can formulate and demarcate research problem clearly can identify a target group for which the research is relevant, and for which the research outcomes will be useful can formulate the main research question and the related sub-questions can design research methodology that fits with the research question(s) can synthesise previously acquired knowledge with new findings, or the adaptation of such knowledge to specific conditions can demonstrate the applicability of the results can formulate conclusions based on the research results can formulate recommendations for the selected target group of the research can write a research report conform the rules for report writing can present the results of the research in a structured and engaging manner and can answer questions satisfactorily 			
Aeres competencies:		Based on own choice for the graduation phase (level 3)			
Final qualifications:		Check curriculum overview and programme profile			

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P.O. Box 374, 8250 AJ Dronten
De Drieslag 4, Dronten
The Netherlands
+31 88 020 6000
aeresuas.nl/dronten
info.hogeschool.dronten@aeres.nl