

Implementation Regulation EER HZ 2019-2020

Logistics Engineering – full-time

Chapter 1 General provisions Implementation Regulation HZ EER

1.1 General

- 1.1.1 The HZ Education and Examination Regulation (HZ EER) covers the core of education within the HZ. This document provides a general overview of all programmes taught at the HZ. The HZ EER contains institution-specific provisions, so those that apply to the entire HZ. A programme-specific HZ EER Implementation Regulation (hereinafter: Implementation Regulation) is established for each programme by the executive board each year.

1.2 Programme committee

- 1.2.1 Prior to the establishment of the Implementation Regulation in question, the programme committee is given the opportunity to offer a recommendation to the executive board.
- 1.2.2 The programme committee evaluates the manner of implementation of the education and examination regulation and the Implementation Regulation in question every year.

1.3 Domain director

- 1.3.1 The domain director concerned is responsible for:
- a. the implementation of the HZ EER;
 - b. structure and execution of the Implementation Regulation;
 - c. the annual evaluation for the Executive Board of the HZ EER and the Implementation Regulation in which it considers the time spent by students arising from monitoring and where necessary adjusting the course workload (Art. 7.14 of the WHW);
 - d. preparing and adjusting the Implementation Regulation.

Chapter 2 Implementation Regulation HZ EER

2.1 Registration, prior educational requirements, and admission policy

2.1.1 Overview of additional prior educational requirements (art. 2.3 HZ EER in addition to the requirements as listed under article 2.2 HZ EER)

1. The following additional prior educational requirements apply for admission to the Logistics Engineering programme with a havo diploma:				
Havo profiles	NT	NG	EM	CM
Student with a havo diploma up to 1-8-2009	v	v	mathematics b1 or mathematics a12	(mathematics b1 or mathematics a12) + physics1
Student with a havo diploma from 1-8-2009	v	v	v	-/-
2. The following additional prior educational requirements apply for admission to the Logistics Engineering programme with a vwo diploma:				
Vwo-profiles	NT	NG	EM	CM
Student with a vwo diploma up to 1-8-2010	v	v	v	(mathematics b1 or mathematics a12) + physics1
Student with a vwo diploma from 1-8-2010	v	v	v	-/-

Legend: V = sufficient; -/- = not admissible; name of a subject = exam must be completed in addition to the profile.

<p>Overview of mbo domains that do not offer direct admission to the hbo technology sector, including the Logistics Engineering programme</p> <ul style="list-style-type: none"> the mbo domain trade and entrepreneurship to the hbo sector technology the mbo domain economics and administration to the hbo sector technology
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2.1.1a Special prior additional educational requirements - only for Pabo (art. 2.3a HZ EER)
N/A

2.1.2 Deficiency examination (art. 2.4 HZ EER) (art. 2.3 paragraph 4 HZ EER - mbo) (art. 2.3a paragraph 67 HZ EER - Pabo)

If not all additional prior educational requirements have been met, there is a deficiency.

- For registration for the Logistics Engineering programme with a havo CM or vwo CM diploma, or with an mbo diploma that doesn't provide direct admission (see 2.1.1), the deficiency examination consists of: mathematics B at the final level of havo EM.
- The procedure in case of a deficiency consists of the following steps:
 - The candidate upon registration submits a request for a deficiency examination to the programme coordinator.
 - The programme will discuss the way in which the deficiency examination will take place with the candidate in a timely fashion.

- Preferably, the candidate will take part in the self-study course in mathematics and complete this with the accompanying examination. If this is not possible, the programme will organize its own extra mathematics examination in a timely fashion. There is one retake opportunity.
- The candidate will be informed of the result within two weeks.
- The student must catch up on the deficiency before the beginning of the programme, which means that a 5,5 or higher was scored on the examination of the self-study course in mathematics (or the extra mathematics examination organized by the programme).

2.1.3 Additional requirements (art. 2.5 HZ EER)

N/A

2.1.4 Admission requirements employment for part-time programme (art. 2.6. HZ EER)

N/A

2.1.5 Entry requirements employment for dual programme variant (art. 2.7. HZ EER)

N/A

2.2 Structure of programme and education

2.2.1 Programme profile (art. 3.2 HZ EER)

The following description was derived from “Professional & Education Logistics Profile” (National Logistics Platform hbo (higher vocational education, March 2013).

The Top Logistics Team’s “Score to the top” report defines logistics as “[...] the knowledge and skills needed to efficiently, sustainably and effectively plan, organize, execute and manage the goods and information flows and any associated financial flows from raw material to the end product”. This includes return flows and reuse, both within one company and between companies. The term ‘logistics’ includes Supply Chain Management, Logistics management and Transport management.

Perhaps more than in any other profession, a logistician needs to be able to act as both a specialist and a generalist. Specialist intervention is required for logisticians involved in a specific component within the chain, for example a production or distribution manager. A generalist perspective is required to ensure that the entire chain can operate as efficiently and effectively as possible. The young starting logistician is expected to be able to coordinate at least two links within the chain and be actively involved with all of a company’s logistical development stages.

Logisticians focus on the optimisation of processes. This should be understood in the broadest sense. The logistician needs to make decisions, by mutual consent, regarding the:

- (physical) set up of i.e. a warehouse, production operation, chain and/or network;
- management (the way in which processes are controlled);
- information provision;
- personal organization: the effective coordination between logistics and other functions within the organization.

These decisions are dependent on the logistical objectives posed. The logistical objectives concern the optimisation of customer service in conjunction with the overall costs.

Graduated logisticians are employed by (inter)national SMEs or large industrial and service companies. In the world of SMEs and non-profit organizations, such as governments and hospitals, a starting position at management level is no exception. Among the large organizations, the young logistician will advance to a management position through various specialised positions.

Specialist functions concern specific clusters of activities, such as purchasing, production, transport, warehousing and customer service. The professional field is very diverse due to the differences in the level of logistical development among companies. Depending on the size of a company, graduates can within a few years advance from employee or planner to for instance management and executive positions. This career growth applies to the various professional situations: supply chain, transport, warehouse and production. Additionally, there are other positions such as consultant, project staff member and manager and specialist in logistical ICT applications. Logistics professionals are also found in the logistics sector, industry and commerce. Finally, logisticians also find work in other sectors (professional situations) such as ICT, healthcare, government, banks and insurance companies.

The positions sketched out above are applicable to both the Logistics and Economics (LE) Bachelor’s programme, as well as the Logistics and Technical Transport Management (LTTM, currently known as Logistics Engineering) Bachelor’s programme. We can also differentiate between various different positions for LE and LTTM. Specific examples for LTTM include: Production Planner, Material Planner, Operations Manager, Logistics Analyst or Engineer. For the technically-oriented logistician, the focus is on the procedural and technical optimisation of the global chain within the commercial objectives of the company. Techniques and the procedures are the central focus with attention paid to management, application and use of ICT and technical logistical tools.

Chain and network thinking are once again very important here. The aspects related to information and communication technology, the process management side, and the optimisation of the intermodal (and these days also synchronodal) transport in the entire chain are addressed.

In response to the Van Laarhoven Committee's vision and ambition, the Top Logistics Team has compiled an Action plan for logistics and supply chains in the Netherlands. The "Score to the top" report sets out the following ambition: "The Top Logistics Sector will make a maximum contribution to strengthening the international competitive position of the Netherlands."

The Top Logistics Team has the following ambition in relation to this. In 2020 the Netherlands will have a leading international position:

- (1) in the handling of goods flows,
- (2) as a chain director of (inter)national logistics activities and
- (3) as a country with an attractive innovation and business climate for the shipping and logistics business communities.

The logistics hbo Bachelor's programmes have been tasked with producing a sufficient outflow of graduates from this agenda, in order to satisfy the increasing need for qualified logisticians.

2.2.2 Competencies (art. 3.2 HZ EER)

The following description was derived from “Professional & Education Logistics Profile” (National Logistics Platform hbo (higher vocational education), March 2013). This document describes the general logistics competency as follows: “Professionally developing, managing and executing logistical processes”.

This competency has been elaborated in the following five sub-competencies (no. 4 and 5 are described as “complementary”). These fulfil the Dublin Descriptors, the domain competencies of Bachelor of Engineering and the international ELA Standards.

The five sub-competencies have been elaborated in subtasks 1.1 through 5.4 by the National Platform Logistics. The HZ research competency corresponds to the subtasks 1.1, 1.2, 4.2 and 5.3. In its Coverage Matrix, the Logistics Engineering programme further elaborated the subtasks (two-digit) in learning goals (three-digit, see attachment). The “Contents” heading in the course tables refers to this from page 11.

Description of the competency of the programme:	
1	Developing a logistics policy
	1.1 Acquires insight into logistics issues through analysis.
	1.2 Researches a (technical) logistics issue, designs a process or methodology and gives appropriate advice.
	1.3 Delivers a contribution to developing and designing chains and networks together with technical developments.
2	Manages operational logistical processes
	2.1 Leads operational processes in the field of logistics (management)
	2.2 Plans and prepares for (technical) issues, elaborates and fleshes out budgets and contracts logistical activities.
	2.3 Can design, manage and improve logistical processes.
3	Executing logistical operations
	3.1 Organises the execution and management of logistical operations.
	3.2 Recognizes problems within logistical operations, determines diagnoses and corrections and ensures these are carried out.
	3.3 Realises and implements new processes or methods in (technical) logistical operations.
4	Social and communicative Logistics sub-competency
	4.1 Works together in a professional environment and helps think about the organisation’s objectives and structure, with characteristics like multidisciplinary, interdisciplinarity, collegiality and leadership.
	4.2 Communicates effectively and professionally in the common business language and in relevant professional situations at all levels.
	4.3 Takes (international) cultural differences into account.
5	Self-managing Logistics sub-competency
	5.1 Manages and regulates own development in terms of learning.
	5.2 Has a professional work attitude.
	5.3 Acts professionally, ethically and in a (socially) responsible manner.
	5.4 Contributes to the in-depth development of his or her profession.

2.2.3 Programme structure (art. 3.3, 3.13, HZ EER)

Programme structure:	
National name:	Logistics Engineering
International name:	Logistics Engineering
Title conferred:	Bachelor of Science
Programme duration:	4 years
Course workload foundation phase:	60 EC
Course workload main phase:	180 EC
Variant:	Full-time
Croho code:	34390
Location:	Vlissingen
Language:	Dutch / English
Starting date of accreditation:	30-11-2017
Expiry date of accreditation:	29-11-2023
Date of extension:	N/A
Associate degree:	An AD programme in Logistics will be offered by the HZ at the Associate Degree Academy in Roosendaal from September 2018 on
Joint degree programme:	N/A
Accelerated hbo (vwo) track	N/A

Logistics Engineering Curriculum Overview

Year 1 (foundation) 2019-2020 students enrolling in September 2019

Dutch programme

	Blok 1		Blok 2		Blok 3		Blok 4	
	De Transportspecialist		De DC-engineer		De Evenementenorganisator		De Inkoop- en Operations manager	
Jaar 1	CU70101V1 De Transportspecialist	5	CU70111V1 De DC- engineer	5	CU70131V1 De Evenementenorganisator	5	CU70141V1 De Inkoop- en Operations manager	2,5
	CU70103V2 Inleiding internationale logistiek	2,5	CU70113V1 Magazijnen en DC's	2,5	CU70133V1 Human logistics 1 - Evenementenlogistiek	2,5	CU70143V1 Inkoopmanagement	2,5
	CU70105V1 Intermodaal transport	2,5	CU70115V1 Business & Information Systems NL	2,5	CU70135V1 Toegepaste statistiek voor Logistiek	2,5	CU70145V1 Operations management NL	2,5
	CU70107V1 Logistiek financieel management 1	2,5	CU70117V1 Logistiek financieel management 2	2,5	CU70137V1 Organisatie & Management LE 1	2,5	CU70147V2 Workshops Excel & Simulatie	2,5
	CU70121V1 Persoonlijke vorming voor studie en beroep LE 1			1,25	CU70151V1 Persoonlijke vorming voor studie en beroep LE 2			1,25
	CU70123V1 Toegepaste wiskunde voor Logistiek			2,5	CU70153V1 Onderzoek van logistieke processen			2,5
	CU70125V1 Logistics English 1			1,25	CU70155V1 Logistics English 2			1,25

International (English taught) programme

	Quarter 1		Quarter 2		Quarter 3		Quarter 4	
Year 1	The Transport specialist		The DC engineer		The Event organizer		The Purchasing and Operations manager	
	CU70102V1 The Transport specialist	5	CU70112V1 The DC engineer	5	CU70132V1 The Event organizer	5	CU70142V1 The Purchasing and Operations manager	2,5
	CU70104V2 Introduction to international logistics	2,5	CU70114V1 Warehouses and DC's	2,5	CU70134V1 Human logistics 1 – Event logistics	2,5	CU70144V1 Purchasing management	2,5
	CU70106V1 Intermodal transport	2,5	CU70116V1 Business & Information Systems INT	2,5	CU70136V1 Applied statistics for Logistics	2,5	CU70146V1 Operations management INT	2,5
	CU70108V1 Logistics financial management 1	2,5	CU70118V1 Logistics financial management 2	2,5	CU70138V1 Organisation & management LE 1	2,5	CU70148V2 Workshops Excel & Simulation	2,5
	CU70122V1 Personal development for study and profession LE 1		1,25		CU70152V1 Personal development for study and profession LE 2		1,25	
	CU70124V1 Applied mathematics for Logistics		2,5		CU70154V1 Research of logistical processes		2,5	
	CU70125V1 Logistics English 1		1,25		CU70155V1 Logistics English 2		1,25	

Year 2 2019-2020 for students enrolling in September 2018
 Dutch programme

	Blok 5		Blok 6		Blok 7		Blok 8	
Jaar 2	De Productieplanner		De Internationale distributiemanager		De Logistieke project- en verandermanager		De Supply chain manager	
	CU70201V1 Productieplanning & voorraadbesturing	5	CU70205V1 Fysieke distributie	5	CU70212V1 De Logistieke project- en verandermanager	5	CU70220V1 De Supply chain manager	2,5
	CU70203V1 Maritieme logistiek en recht	2,5	CU70207V1 Marketing en exportmanagement	2,5	CU70214V1 Project- & veranderingmanagement	2,5	CU70222V1 Supply chain management NL	2,5
	CU22627V3 Logistics English 3	1,25	CU22628V3 Logistics English 4	1,25	CU70216V1 Training Management-vaardigheden	2,5	CU70224V1 Lean Six sigma voor logistiek	2,5
					CU70218V1 Maritiem koel- & vriestransport	2,5	CU70226V1 Smart logistics & Big data NL	2,5
							CU70228V1 Human Logistics 2 – Zorglogistiek	2,5
	CU70209V1 Tweedaagse stage S3 of CU70210V1 Logistiek advies aan een onderneming S3		10		CU70230V1 Logistics English 5		2,5	
	VCCU70285V1 HZ Personality LE1		1,25		VCCU70287V1 HZ Personality LE3		1,25	
	VCCU70286V1 HZ Personality LE2		1,25		VCCU70288V1 HZ Personality LE4		1,25	

International (English-taught) programme

	Quarter 5		Quarter 6		Quarter 7		Quarter 8	
Year 2	The Production planner		The International distribution manager		The Logistics project and change manager		The Supply chain manager	
	CU70202V1 Production planning & stock control	5	CU70206V1 Physical distribution	5	CU70213V1 The Logistics project & change manager	5	CU70221V1 The Supply chain manager	2,5
	CU70204V1 Maritime logistics and law	2,5	CU70208V1 Marketing and export management	2,5	CU70215V1 Project & change management	2,5	CU70223V1 Supply chain management INT	2,5
	CU22627V3 Logistics English 3	1,25	CU22628V3 Logistics English 4	1,25	CU70217V1 Management skills training	2,5	CU70225V1 Lean six sigma for logistics	2,5
					CU70219V1 Maritime reefer transport	2,5	CU70227V1 Smart logistics & Big data INT	2,5
							CU70229V1 Human logistics 2 – Care logistics	2,5
	CU70209V1 Two day internship S3 or CU70211V1 Logistics advice to a company S3			10	CU70230V1 Logistics English 5			2,5
	VCCU70285V1 HZ Personality LE1			1,25	VCCU70287V1 HZ Personality LE3			1,25
	VCCU70286V1 HZ Personality LE2			1,25	VCCU70288V1 HZ Personality LE4			1,25

Year 3 2019-2020 for students enrolling in September 2017

- Semester 5: CU11112 Internship for professional orientation (30 EC, see 2.2.8)
- Semester 6: free minor (30 EC, see 2.2.9 and 2.2.10).

Year 4 2019-2020 for students enrolling in September 2016

- Semester 7: specialisations Supply chain management, Human logistics or Maritime logistics (30 EC, see 2.2.7)
- Semester 8: CU11113 Graduation internship (30 EC, see 2.2.11).

	Semester 7 *	Semester 8		
Year 4	Specialisation in Supply chain management, Human logistics or Maritime logistics	Graduation		
	CU05970V10 Logistics Information Systems	5	CU11113V12 Afstuderen / Graduation Internship	30
	CU15377V4 Preparation graduation Logistics	2,5		
	CU15379V4 Management Development Training	5		
	CU17009V3 Specialization Supply chain management or CU17010V3 Specialization Human logistics or CU17011V3 Specialization Maritime logistics	15		
	VCCU70481V1 HZ Personality LE5	1,25		
	VCCU70482V1 HZ Personality LE6	1,25		

* The programme in semester 7 is taught in English (when there are international students subscribed to a specialisation) and the groups are composed of Dutch and International students.

Deviating intake cohorts

The tables above state the intake cohort that participates in the relevant academic year according to the regular route (for example, an September 2018 entrant regularly participates in the second academic year in 2019-2020). Students who work ahead follow the same program as the previous intake cohort that regularly follows the relevant academic year (for example, an September 2017 enroller who already participates in the fourth academic year in 2019-2020, follows the courses of the table above for that fourth year of the intake cohort September 2016).

Students who have not completed expired or changed courses of their regular intake cohort from the UR 2018-2019 have the right to take two tests for the same courses in 2019-2020 according to article 6.2 paragraph 11 of the OER. If the expired or changed courses from the 2017-2018 UR or earlier are concerned, this option does not exist and the student must follow replacement courses from the relevant academic year from the intake cohort listed in the above tables (for example, a student from the September intake cohort 2016, who did not pass an expired / changed course from his second year, does a replacement second-year course from the intake cohort September 2018). Which course serves as a replacement is decided by the Examination Board, on the advice of the Logistics Engineering training coordinator.

2.2.4 Courses foundation phase (art. 3.5, 3.11 HZ EER)

Year 1 - Block 1											
CU70101V1		Title: De Transportspecialist				Number of ECs: 5		Mandatory: Yes		Language: NL	
CU70102V1		The Transport specialist								ENG	
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: The logistical position of Transport Specialist is the focus of this first block. The other courses of the block are a bit more theoretical in nature and provide the necessary basic knowledge and skills for the position. The course "The Transport Specialist" runs parallel to this. You directly apply that which you have learned to a relatively large, integral assignment derived from professional practice. This partly takes place in small groups and partly individually. When you successfully complete the integral assignment, you show that you have mastered the competencies for the position of transport specialist at the "beginner level" (level 1) of the programme.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1			X	Oral assessment on the basis of portfolio	1.1.1, 1.2.3, 1.2.4, 2.2.5, 2.3.3, 3.2.3	100%	5,5	43	43	44	44
Test no.	Assessment method										
1	Partly individual and partly in a group										
Number of contact hours	70										

CU70103V2	Title: Inleiding internationale logistiek				Number of ECs: 2,5	Mandatory: Yes	Language: NL				
CU70104V2	Introduction to international logistics						ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: Logistics is sometimes described as “integral management of goods flows”, in other words, logistics ensures that projects flow through the chain on time and at low cost. This includes activities such as: planning, warehouse management, stock control, purchasing and physical distribution. Logistical principles can, in addition to physical goods flows, also be applied to administrative processes, data flows and financial flows among others. This introductory course provides a broad overview of the field.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X		Written final examination	1.2.2, 1.2.3, 1.2.4	70%	5,5	41	43	44	46
2		X		Report	1.2.4	30%	5,5	42	44	45	46

Test no.	Assessment method
1	Individual
2	Individual
Number of contact hours	24

CU70105V1	Title: Intermodaal transport				Number of ECs: 2,5	Mandatory: Yes	Language: NL				
CU70106V1	Intermodal transport						ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: This course will introduce you to means of transport with their distinctive characteristics, including costs, technology, (legal) limitations and regulations and their suitability for: long or short distances, and the characteristics of the products they transport. Characteristics of goods such as solid, liquid, gas, bulk, packaged, palletised etc. are also important aspects. How are the modes of transport connected? Who are the parties involved in the chains?											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X			Written final examination	100%	5,5	41	43	44	46

Test no.	Assessment method
1	Individual
Number of contact hours	24

CU70107V1	Title: Logistiek financieel management 1				Number of ECs: 2,5	Mandatory: Yes	Language: NL					
CU70108V1	Logistics financial management 1						ENG					
Conditions for participation: none												
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies												
Brief description of the course content: Knowledge and insight into the financial situation is an important success factor for a company. How do you stimulate sound financial management? You'll face this question as a logistician as well. How do you justify choosing a certain mode of transport (for example, road, rail or air transport) with a cost-price analysis? And how do you monitor the previously established cost budget? In addition these matters, we also discuss the balance sheet and the profit and loss account.												
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week	
	M	S	A	Form								
1		X			Written final examination	1.2.2, 2.2.5, 2.3.3	100%	5,5	41	43	44	46

Test no.	Assessment method
1	Individual
Number of contact hours	24

Year 1 - Block 2

CU70111V1	Title: De DC-engineer				Number of ECs: 5	Mandatory: Yes	Language: NL				
CU70112V1	The DC engineer						ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: The logistical position of DC engineer is the focus of this first block. This is an employee that can (re)design, maintain and improve the logistical processes in a distribution centre. The other courses of the block are a bit more theoretical in nature and provide the necessary basic knowledge and skills for the position. The course “The DC engineer” runs parallel to this. You directly apply that which you have learned to a relatively large, integral assignment derived from professional practice. This partly takes place in small groups and partly individually. When you successfully complete the integral assignment, you show that you have mastered the competencies for the position of DC engineer at the “beginner level” (level 1) of the programme.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1			X	Oral assessment on the basis of portfolio	1.1.3, 1.2.1, 2.2.3, 2.3.1, 2.3.2, 2.3.3, 2.3.4	100%	5,5	3	3	4	4

Test no.	Assessment method
1	Partly individual and partly in a group
Number of contact hours	70

CU70113V1	Title: Magazijnen en DC's				Number of ECs: 2,5	Mandatory: Yes	Language: NL				
CU70114V1	Warehouses and DCs						ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: Warehouses and DCs are intended for storage, transshipment, (de)consolidation and Value Added Logistics. Which methods and resources can be used to effectively manage and execute these processes? Design issues include the different types of racking and handling equipment, the methods of order picking, the reception processes and the shipping procedures. Additionally, attention is paid to topics such as safety, ergonomics, layout, warehouse management systems, capacity calculations, etc.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X			Written final examination	100%	5,5	51	3	4	6

Test no.	Assessment method
1	Individual
Number of contact hours	24

CU70115V1	Title: Business & Information Systems NL				Number of ECs: 2,5	Mandatory: Yes	Language: NL				
CU70116V1	Business & Information Systems INT						ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: Information technology has taken over the world. Computers have become relatively easy to use, but beneath the surface, there is complex world of technology which is the domain of IT specialists. At the same time, companies, organizations and individuals have become entirely dependent on IT. As such, the computer has come to dominate existing business operations. In this course, we'll first discuss how a business process can be analysed and improved. We then examine how information systems can play a role in this. Finally, we'll delve deeper into the types of logistics information systems and their characteristics.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X		Written final examination	2.3.2, 2.3.4, 2.4.3	100%	5,5	51	3	4	6

Test no.	Assessment method
1	Individual
Number of contact hours	24

CU70117V1	Title: Logistiek financieel management 2				Number of ECs: 2,5	Mandatory: Yes	Language: NL				
CU70118V1	Logistics financial management 2						ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: As a follow-up to Logistics financial management 1, we'll discuss investment issues in more depth. A fast-growing logistics service provider can experience a shortage of warehouse capacity. Is it a good idea to invest in a new, company-owned warehouse? Or is it a better to idea to rent it? And what is the effect of this on the profit and loss account? Additionally, various funding ratios are discussed.											
Exam no.	Form			Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week	
	M	S	A								Form
1		X		Written final examination	1.2.1, 2.2.3, 2.2.5, 2.3.3	100%	5,5	51	3	4	6

Test no.	Assessment method
1	Individual
Number of contact hours	24

Year 1 – Entire semester 1

CU70121V1	Title: Persoonlijke vorming voor studie en beroep LE 1				Number of ECs: 1,25	Mandatory: Yes	Language: NL				
CU70122V1	Personal development for education and work LE 1						ENG				
Conditions for participation: none											
Special conditions for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups composed to this end) work on the development of the required competencies. Furthermore, you'll be expected to participate in the meetings with your personal coach.											
Brief description of the course content: As a first-year student, it's still not entirely clear to you what the knowledge you're learning will allow you to do in the future. This exploratory course gives you a glimpse of the course of your studies and especially the logistical professions you'll be able to practice after graduation. Alumni and other professionals will tell you about their job, we'll visit various companies and look over the shoulder of students who are already doing their internship. In this course, tests and performance reviews help you discover where your specific interests and talents in the field of logistics lie and how you can deploy these for your own personal and professional development. The lesson time will furthermore be used for conversations and meetings with your study career coach and/or your personal coach. You'll also work on your portfolio with STARRT forms at level 1.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1	X	X		Reports on assignments	3.2.2, 5.1.1, 5.1.2, 5.2.1, 5.2.2	100%	5,5	51	3	4	6

Test no.	Assessment method
1	Individual
Number of contact hours	16

CU70123V1	Title: Toegepaste wiskunde voor Logistiek				Number of ECs: 2,5	Mandatory: Yes	Language: NL				
CU70124V1	Applied mathematics for Logistics						ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: Evaluating manipulations with quantitative data. Being able to work with and edit formulas. Graphical representation of quantitative data. Interpretation of graphic data. Applying mathematics in the logistics profession.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X		Written final examination	1.1.2, 1.1.3, 2.3.3	100%	5,5	51	3	4	6

Test no.	Assessment method
1	Individual
Number of contact hours	24

CU70125V1	Title: Logistics English 1				Number of ECs: 1,25	Mandatory: Yes	Language: ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: In this course, attention is paid to: 1. Reading and understanding general and programme-related texts and documents. 2. Writing a blog about one's own studies. 3. Having simple conversations about topics that relate to the professional field. 4. Acquiring relevant vocabulary.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X		Written final examination	4.2.1, 4.2.2	100%	5,5	51	3	4	6

Test no.	Assessment method
1	Individual
Number of contact hours	16

Year 1 - Block 3

CU70131V1 CU70132V1	Title: De Evenementenorganisator The Event organizer				Number of ECs: 5	Mandatory: Yes	Language: NL ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: The focus of this third block is the position of Event Organizer. You directly apply that which you have learned in other courses to a relatively large, integral assignment derived from professional practice. During this integral assignment, the organization of an event is analysed in depth. The cooperation between the various stakeholders (including the municipality, the safety region and event agency) will also be further developed. These stakeholders often have different organizational structures which will be compared. Finally, a statistical substantiation of the processes will also be discussed, for example the spread of wait times at event.											
Exam no.	Form			Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week	
	M	S	A								
1			X	Oral assessment on the basis of portfolio	1.1.2, 1.3.5, 2.3.3, 2.4.1, 4.3.1	100%	5,5	14	14	15	15

Test no.	Assessment method
1	Partly individual and partly in a group
Number of contact hours	70

CU70133V1 CU70134V1	Title: Human logistics 1 – Evenementenlogistiek Human logistics 1 – Event logistics				Number of ECs: 2,5	Mandatory: Yes	Language: NL ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: Human logistics concerns the logistical processes of flows of people instead of flows of goods. Examples are hospitals, pop festivals, disasters or sports events. Many principles of “regular” logistics are also very important in Human Logistics, and are easily translated to situations in which flows of people have to be managed. Other aspects are more specific, for example anticipating security problems in the form of an evacuation plan. In this first course about Human Logistics, events in particular are discussed.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X		Written final examination	1.2.3, 1.3.4, 2.2.2, 3.1.4	100%	5,5	12	14	15	17

Test no.	Assessment method
1	Individual
Number of contact hours	24

CU70135V1 CU70136V1	Title: Toegepaste statistiek voor Logistiek Applied statistics for Logistics				Number of ECs: 2,5	Mandatory: Yes	Language: NL ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: Descriptive statistics, probability distributions, estimating reliably, tests, representing research results. Create graphs such as histograms, bar charts, pie charts etc. Applications of statistics in the logistic profession.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
		X		Written final examination	1.1.2, 1.1.3, 3.2.3	100%	5,5	12	14	15	17

Test no.	Assessment method
1	Individual
Number of contact hours	24

CU70137V1	Title: Organisatie & management LE 1				Number of ECs: 2,5	Mandatory: Yes	Language: NL				
CU70138V1	Organization & Management LE 1						ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: Organizations are studied from various perspectives. There are different ways to structure an organization. Whether it's a large international logistical service provider, customs or a consultancy firm. How does the decision-making process work within an organization and how do organizations cooperate to achieve a common goal? Additionally, our society is changing very rapidly, so it's important for an organization to stay in motion. As such, we also pay attention to the question of how an organization remains optimally attuned to its environment.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X		Written final examination	1.2.2, 2.1.2, 2.4.3	100%	5,5	12	14	15	17

Test no.	Assessment method
1	Individual
Number of contact hours	24

Year 1 - Block 4

CU70141V1	Title: De Inkoop- en Operations manager			Number of ECs:	Mandatory: Yes	Language: NL					
CU70142V1	The Purchasing and Operations manager			2,5		ENG					
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: The focus of this last block of the foundation phase is on two related positions: the Purchasing Manager and the Operations Manager. Both also have an important logistical component, but in addition also cover other tasks. The other courses of the block are a bit more theoretical in nature and provide the necessary basic knowledge and skills for the two positions. The “Purchasing and Operations Manager” course runs parallel to this. You’ll directly apply that which you have learned to a complex logistics game. You’ll make all kinds of decisions in various roles which are also very important in a real company. This is done in small groups in which the manner of collaboration is essential. When you successfully complete the game and can also carry out a thorough analysis of the results, you show that you master the competencies for the two positions at the “beginner level” (level 1) of the programme. Because the Logistics Engineering programme is billed for the game, every student is asked for a financial contribution.											
Exam no.	Form			Content	Weighting factor	Minimu mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week	
	M	S	A								
1			X	Assessment on the basis of game The Fresh Connection	2.1.2, 2.2.1, 3.1.2, 3.1.3, 4.1.1	100%	5,5	25	25	26	26

Test no.	Assessment method
1	Partly individual and partly in a group
Number of contact hours	32

CU70143V1	Title: Inkoopmanagement				Number of ECs: 2,5	Mandatory: Yes	Language: NL				
CU70144V1	Purchasing management						ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: Purchasing management is about managing incoming flows of goods. This concerns the raw materials, materials, parts, semi-finished goods etc. which a company buys from suppliers. Services like catering, security or logistics can also be purchased. Both the operational purchasing processes and the tactical and strategic processes are discussed.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X		Written final examination	1.3.5, 2.2.3, 2.2.4, 2.2.5, 3.1.5, 5.3.2	100%	5,5	23	25	26	28

Test no.	Assessment method
1	Individual
Number of contact hours	24

CU70145V1	Title: Operations management NL				Number of ECs: 2,5	Mandatory: Yes	Language: NL				
CU70146V1	Operations management INT						ENG				
Conditions for participation: none											
Special conditions for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies.											
Brief description of the course content: Operations management is about the way in which organizations produce products and service. In addition to Market and Product Development, this is one of the core functions of an organization. It has a lot of overlap and intersections with Logistics. This course provides an overview of the field and explores topics like production technology, factory layout, function design, maintenance management, quality control and queueing theory in more detail.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X		Written final examination	2.3.1, 2.3.3, 2.3.4, 3.1.3, 3.3.1	100%	5,5	23	25	26	28

Test no.	Assessment method
1	Individual
Number of contact hours	24

CU70147V2	Title: Workshops Excel & Simulatie				Number of ECs: 2,5	Mandatory: Yes	Language: NL				
CU70148V2	Workshops Excel & Simulation						ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: This course will prepare you for quantitative research. You'll carry out a small study using a questionnaire. You'll analyse the outcomes of the questionnaire using Excel and you'll describe them in a report. On the one hand this course will teach you skills to acquire, read and interpret research results, and on the other hand skills to process research data into a report. You'll furthermore learn how to make a questionnaire; work with work sheets; use pivot tables and graphs; data validation; processing and reading statistical data and learn to link Excel to other computer programmes. You'll also learn to simulate relatively complex logistical practical situations using the Enterprise Dynamics package.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X		Written exam	1.1.3, 3.2.3	50%	5,5	23	25	26	28
2		X		Reports on assignments	1.2.1	50%	5,5	24	26	27	29

Test no.	Assessment method
1	Individual
2	Partly individual and partly in groups
Number of contact hours	24

CU70149V1	Title: Organisatie & management LE 2				Number of ECs: 2,5	Mandatory: Yes	Language: NL				
CU70150V1	Organization & Management LE 2						ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: As follow-up to Organization & Management LE1, we will zoom in further on how organizations relate to their environment. Which strategy will be most successful? How is the competition doing? You'll then examine the role of employees and what motivates them. And what is the role of management in this? You'll finally study the various ways in which an organization can be managed.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X		Written final examination	1.2.2, 2.1.1, 2.1.3	100%	5,5	23	25	26	28

Test no.	Assessment method
1	Individual
Number of contact hours	24

Year 1 – Entire semester 2

CU70151V1	Title: Persoonlijke vorming voor studie en beroep LE 2				Number of ECs: 1,25	Mandatory: Yes	Language: NL					
CU70152V1	Personal development for study and profession LE 2						ENG					
Conditions for participation: none												
Special conditions for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups composed to this end) work on the development of the required competencies. Furthermore, you'll be expected to participate in the meetings with your personal coach.												
Brief description of the course content: As a first-year student, it's still not entirely clear to you what the knowledge you're learning will allow you to do in the future. This exploratory course gives you a glimpse of the course of your studies and especially the logistical professions you'll be able to practice after graduation. Alumni and other professionals will tell you about their job, we'll visit various companies and look over the shoulder of students who are already doing their internship. In this course, tests and performance reviews will help you discover where your specific interests and talents in the field of logistics lie and how you can deploy these for your own personal and professional development. The lesson time will furthermore be used for conversations and meetings with your study career coach and/or your personal coach. You'll also work on your portfolio with STARRT forms at level 1.												
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week	
	M	S	A	Form								
1	X	X			Reports on assignments	5.1.1, 5.1.2, 5.2.1	100%	5,5	23	25	26	28

Test no.	Assessment method
1	Partly individual and partly in a group
Number of contact hours	16

CU70153V1	Title: Onderzoek van logistieke processen				Number of ECs: 2,5	Mandatory: Yes	Language: NL				
CU70154V1	Research of logistical processes						ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: One of the competencies of Logistics Engineering is (re)designing logistical processes. Research skills are very important here. During graduation you'll show that you have mastered the design competency at the final level of the programme. This course will make a first step towards that level because it familiarizes you with the principles of logistical research. There are various methods and techniques to describe, quantify, analyse, evaluate and improve processes. You'll learn both general research methods and specific techniques used in logistics (Learn six sigma, Theory of constraints).											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X		Written final examination	1.1.1, 1.2.1, 3.3.2	100%	5,5	23	25	26	28

Test no.	Assessment method
1	Individual
Number of contact hours	24

CU70155V1	Title: Logistics English 2				Number of ECs: 1,25	Mandatory: Yes	Language: ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: In this course, attention is paid to: 1. Reading and understanding job vacancies in the field. 2. Written elaboration and oral presentation of a suitable professional profile. 3. Carry out professionally-oriented conversations taking into account basic social customs. 4. Acquiring relevant vocabulary.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1	X			Oral – conversation + job description	4.2.1, 4.2.2, 4.3.2	100%	5,5	23	25	26	28

Test no.	Assessment method
1	Partly individual and partly in a group
Number of contact hours	16

2.2.4a Addition for the programmes involved in the sector-wide conversion in the Technology sector

N/A

2.2.5. Main phase courses (art 3.6, 3.11 HZ EER)

Year 2 - Block 5											
CU70201V1 CU70202V1		Title: Productieplanning & voorraadbesturing Production planning & stock control				Number of ECs: 5		Mandatory: Yes		Language: NL ENG	
Conditions for participation: none											
Special condition for awarding credits (checked off): N/A											
Brief description of the course content: The Production planning & stock control course discusses a number of important logistical questions. It discusses the various systems and methods which you can use to answer these questions. How much production capacity is needed? How many products do you make or order in an optimal series? What is the required safety stock to be able to absorb unexpectedly high demand and achieve a certain service level? At which utilisation rate are machines cost-effective without making the lead time of products too long? In which order do you go through customer orders? How does a method like Material Requirements Planning work, and how does it differ from the Just-in-Time approach? How do you create a network planning? You'll get answers to these kinds of questions. We also go deeper into simulating with Enterprise Dynamics.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X		Written final examination	2.3.2, 2.3.4, 3.1.2, 3.1.3	100%	5,5	44	46	51	3

Test no.	Assessment method
1	Individual
Number of contact hours	48

CU70203V1 CU70204V1	Title: Maritieme logistiek en recht Maritime logistics and law				Number of ECs: 2,5	Mandatory: Yes	Language: NL ENG					
Conditions for participation: Taken CU03073/14141 Introduction in international logistics and CU03167/14142 Intermodal transport.												
Special condition for awarding credits (checked off): N/A												
Brief description of the course content: These course will address three port-related topics, namely the ‘Cargadoor’, Know the Ship and Transport Law. The ‘Cargadoor’ (ship broker) is the intermediary between the shipper and the shipping company. It’s mainly a logistical position, which uses planning and coordination to ensure that goods get on the ship on time and that it can leave on time. In addition to the shipper and the shipping company, the ship broker also communicates with parties such as transport companies, customs, stevedores and governments. The Know the Ship component introduces logistics students to the nautical and (to a lesser degree) technical aspects of the ship. This is important to every logistics student, because the principles can also be translated into other transport modalities. Those who want to specialise in maritime logistics in semester 7 acquire essential basic knowledge. You learn how a ship is prepared to set sail and how a ship works. The Transport Law component looks at international trade and transportation from the perspective of the port. International transport law is discussed, but also transport over inland waterways, road transport, combined transport and especially maritime transport.												
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week	
	M	S	A	Form								
1		X			Report on assignments Cargadoor/Transport Law	1.3.1, 1.3.2, 1.3.4, 3.1.4, 3.2.1	100%	5,5	43	45	47	49
Test no.		Assessment method										
1		Partly individual and partly in a group										
Number of contact hours		24										

CU22627V3	Title: Logistics English 3 – Describing trends				Number of ECs: 1,25	Mandatory: Yes	Language: ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): N/A											
Brief description of the course content: In this course students learn how to describe graphs and change. In order to do this correctly, we'll cover certain language like prepositions, adjective, adverbs and linking words. The digital portfolio includes (language) tasks that will expand your vocabulary. On top of that, you'll deal with specific tasks that are related to describing trends. The digital portfolio helps you prepare for your final task, a graph description.											
Exam no.	Form				Content	Weighting factor	Minimu mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1			X	Digital portfolio	4.2.1, 4.2.2, 4.3.2	50%	5,5	41	43	44	45
2	X			Graph description	4.2.1, 4.2.2, 4.3.2	50%	5,5	41	43	44	46

Test no.	Assessment method
1	Individual
2	Individual
Number of contact hours	12

Year 2 - Block 6

CU70205V1	Title: Fysieke distributie				Number of ECs: 5	Mandatory: Yes	Language: NL				
CU70206V1	Physical distribution						ENG				
Conditions for participation: Taken CU03073/14141 Introduction in international logistics and CU03167/14142 Intermodal transport.											
Special condition for awarding credits (checked off): N/A											
Brief description of the course content: Physical distribution is the part of logistics with which you often come into direct contact. How are products moved to and from shops, your front door, or abroad? If this isn't properly organized, the items will not be in good condition or unaffordable. Flows of goods are also increasingly returned for a "second life". In more professional phrasing, the definition of physical distribution is: analysing, planning, executing and controlling decisions regarding flows of goods between producers and buyers in such a way that the products arrive at the final destination at the right time, in the right place and in the right amounts.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X		Written final examination	1.2.2, 1.2.4, 2.2.3, 3.1.1, 3.1.2	50%	5,0 *	4	6	12	14
2		X		Reports on assignments	1.2.3, 2.3.3, 3.1.3	50%	5,0 *	3	5	7	9

* The course as a whole must be completed with a final mark of 5,5 or higher.

Test no.	Assessment method
1	Individual
2	Partly individual and partly in a group
Number of contact hours	48

CU70207V1	Title: Marketing en exportmanagement				Number of ECs: 2,5	Mandatory: Yes	Language: NL				
CU70208V1	Marketing and export management						ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: Marketing knowledge is essential for logistics students. There is a lot of overlap with physical distribution. In the course, you will lay a theoretical foundation on the basis of the so-called four p's: price, product, promotion and place. Through carrying out assignments, you'll go through the marketing and export process step by step. To ultimately arrive at an export marketing plan. Topics like situation analysis, SWOT analysis, market and geographical segmentation, positioning and export strategies are discussed. These are meant to give a detailed picture of the success that the client (preferably the company of your one-day internship) can have with the chosen import/export product market concept.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X		Written final examination	1.3.4, 2.2.2, 2.2.5,	60%	5,5	4	6	12	14
2	X	X		Report	1.2.2, 1.3.2	40%	5,5	5	7	12	14

Test no.	Assessment method
1	Individual
2	Individual
Number of contact hours	24

CU22628	Title: Logistics English 4 – Listening and presentation skills				Number of ECs: 1,25	Mandatory: Yes	Language: ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): N/A											
Brief description of the course content: This course aims to improve listening skills and presentation skills. The digital portfolio prepares for a (digital) listening test and for the final presentation. The listening test is a B2 level test. The final presentation will be a presentation on a certain company, in which students show their ability to provide information on a company, talk about future plans and aim for a specific goal.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1			X	Digital portfolio	4.2.1, 4.2.2, 4.3.2	50%	5,5	51	51	4	5
2			X	Presentation	4.2.1, 4.2.2, 4.3.2	50%	5,5	51/3	51/3	4	5

Test no.	Assessment method
1	Individual
2	In a group
Number of contact hours	11

Year 2 – Entire semester 3

CU70209V1	Title: Two day internship S3				Number of ECs: 10	Mandatory: Yes *	Language: NL ENG				
Conditions for participation: at least 45 EC in Propaedeutic year is obtained.											
Special conditions for awarding credits (checked off): Hourly account of 32 completed internship days (256 hours) plus 12 hours for reporting, as described in the Course Internship Manual.											
Brief description of the course content: During the two day internship you'll work in a logistical environment in order to get to know the practical side as soon as possible. This will allow you to better experience the usefulness of theory and will also allow you to link it directly to practical applications.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1			X	Performance assessment	4.1.1, 4.2.2, 4.3.1, 5.1.2, 5.2.2	50%	5,5	3	5	7	9
2		X		Portfolio	1.1.1, 1.1.2, 1.1.3, 1.2.1, 2.3.1, 3.1.1, 3.1.3, 3.2.1, 3.2.3, 5.3.1	40%	5,5	3	5	7	9
	X			Presentation	4.1.1, 4.2.1, 4.2.2	10%	5,5	3	5	7	9

* The programme prefers this One-day internship. However, there is one alternative, namely: giving logistical advice to a company (CU70210/70211).

Test no.	Assessment method
1	Individual
2	Individual
3	Individual
Number of contact hours	10

CU70210V1	Title: Logistiek advies aan een onderneming S3				Number of ECs: 10	Mandatory: No *	Language: NL				
CU70211V1	Logistics advice to a company S3						ENG				
Conditions for participation: none											
Special conditions for awarding credits (checked off): Hourly accounting for completed hours (256 hours) plus 24 hours for reporting and assessment. See the course manual for the format of the hourly accounting.											
<p>Brief description of the course content: Our future graduates work in an environment in which the borders between subjects and professional fields are increasingly blurred. They must as such be able to function in the area of specialization of others, and be able to tackle complex questions and problems in an increasingly integral and multidisciplinary way. In order to operate successfully in this work environment, the hbo student must have a broad range of skills (21st century skills), be willing to get out of his/her comfort zone, be prepared for professional practice in which a problem is examined from multiple perspectives and be aware of the fact that his ideas can only lead to real innovations if he works together with others from various disciplines.</p> <p>This course offers students the opportunity to acquire knowledge about professional practice by working on and delivering a professional product (for example an analysis, a design, a recommendation, a product). The practical problems posed to students are derived from real life, in other words: are current issues in professional practice and are in any case multidisciplinary, but if possible interdisciplinary in nature and meant to solve the client's problem.</p>											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Work inspection (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1			X	Performance assessment	4.1.1, 4.2.2, 4.3.1, 5.1.2, 5.2.2	50%	5,5	3	5	7	9
2		X		Portfolio	1.1.1, 1.1.2, 1.1.3, 1.2.1, 2.3.1, 3.1.1, 3.1.3, 3.2.1, 3.2.3, 5.3.1	40%	5,5	3	5	7	9
3	X			Presentation	4.1.1, 4.2.1, 4.2.2	10%	5,5	3	5	7	9

* If you participate in this course, you don't have to participate in the One-day internship S3 (CU09424).

Test no.	Assessment method
1	Individual
2	Individual
3	Individual
Number of contact hours	10

VCCU70285V1 VCCU70286V1	Title: HZ Personality LE 1 HZ Personality LE 2				Number of ECs: 1,25 1,25	Mandatory: Yes *	Language: NL/ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): none											
Brief description of the course content: HZ Personality LE 1 and LE 2 are two courses of 1,25 EC each. This fills in the free composition space in semester 3 which amounts to 2,5 EC in total. It's possible to combine the two courses (2,5).											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Work inspection (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1			X	Justification and reflection	N/A	100%	5,5	N/A	N/A	N/A	N/A

* The obligation is that during 2 years, a total of 5 EC is filled with the courses HZ Personality LE 1 through LE 4. However, students are offered freedom of choice.

Test no.	Assessment method
1	Individual
Number of contact hours	N/A

Year 2 - Block 7

CU70212V1	Title: The logistieke project- & verandermanager				Number of ECs: 5	Mandatory: Yes	Language: NL				
CU70213V1	The Logistics project & change manager						ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: The course consists of setting up a project organization and learning to carry out project management. Existing organizations often change because of projects meaning that organizational change management is an important skill in order to successfully implement the modifications.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1	X	X		Oral assessment on portfolio	2.1.1, 2.2.1, 2.2.2, 2.2.5, 2.4.1, 2.4.3, 3.1.4, 3.2.1, 3.3.3	100%	5,5	15	14	15	15

Test no.	Assessment method
1	Partly individual and partly in a group
Number of contact hours	48

CU70214V1	Title: Logistiek project- & verandermanagement				Number of ECs: 2,5	Mandatory: Yes	Language: NL				
CU70215V1	Logistics project & change management						ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: The course consists of setting up a project organization and learning to carry out project management. Existing organizations often change because of projects meaning that organizational change management is an important skill in order to successfully implement the modifications.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1	X	X		Written exam	2.1.1, 2.2.1, 2.2.2, 2.2.5, 2.4.1, 2.4.3, 3.1.4, 3.2.1, 3.3.3	100%	5,5	12	14	15	17

Test no.	Assessment method
1	Individual
Number of contact hours	24

CU70216V1	Title: Training managementvaardigheden				Number of ECs: 2,5	Mandatory: Yes	Language: NL				
CU70217V1	Management skills training						ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): N/A											
Brief description of the course content: Training students in management skills. Good communication is very important within organizations. This applies to all employees. Communication allows people to share information. Communication allows people to be up-to-date on developments, know what is expected of them and allows for coordination between parties. However, communication isn't always easy for people and people often struggle to formulate topics clearly and concretely. People are often insufficiently aware of their style of communication and therefore find it difficult to adjust their communication when situations require this. The course offers students insight into personal patterns of behaviour and personal key qualities and teaches management skills to communicate and influence effectively.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1			X	Meeting at DVD	2.1.2, 3.2.2, 4.1.1	50%	5,5	12	14	15	17
2		X	X	Portfolio	2.1.3, 2.2.1, 2.2.2	50%	5,5	12	14	15	17

Test no.	Assessment method
1	Individual
2	Individual
Number of contact hours	24

CU70218V1	Titel: Maritiem koel- & vrieustransport				Number of ECs: 2,5	Mandatory: Yes	Language: NL				
CU70219V1	Maritime reefer transport						ENG				
Conditions for participation: Taken CU03073/14141 Introduction to international Logistics and CU03167/14142 Intermodal Transport.											
Special conditions for awarding credits (checked off): none											
Brief description of the course content: A special form of transport is the cooled and frozen transport of goods by water. With this part you will have to deal with the so-called cold (supply) chain. You learn about the design of the "cold" chain, its properties and the various goods that belong to this chain. These three elements are the subjects that belong to the content of the assignment that are included in this course.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Work inspection (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1	X	X		Written final examination	1.3.3, 1.3.5, 3.1.1., 3.1.2, 3.1.3	100%	5,5	12	14	15	17

Test no.	Assessment method
1	Individual
Number of contact hours	24

Year 2 - Block 8

CU70220V1	Title: The Supply chain manager NL				Number of ECs: 2,5	Mandatory: Yes	Language: NL					
CU70221V1	Title: The Supply chain manager INT						ENG					
Conditions for participation: Taken CU03170/15382 Production planning & stock control and CU03168/15386 Physical distribution.												
Special conditions for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups composed for this) work on the development of the required competencies; mandatory participation in the logistics game (provided by the programme)												
Brief description of the course content: Supply chain management (SCM) is “managing the chain that connects independent customers and suppliers to as it were create a single entity with the goal of creating value and reducing wastage through the voluntary coordination of goals and activities of all organizations in the chain.” More than in “regular” logistics, cooperation between organizations is sought across the borders of organizations, in the own chain or beyond. Due to this all-encompassing chain perspective, the course is also the conclusion of the first two years of study, by reviewing the discussed logistical subareas in the light of the control of goods flows at the chain level.												
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Work inspection (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week	
	M	S	A	Form								
1		X			Oral assessments on portfolio	1.2.2, 1.3.1, 1.3.2, 1.3.3, 1.3.4, 1.3.5, 3.1.3	100%	5,5	25	25	26	26

Test no.	Assessment method
1	Individual
Number of contact hours	32

CU70222V1	Title: Supply chain management NL				Number of ECs: 2,5	Mandatory: Yes	Language: NL				
CU70223V1	Supply chain management INT						ENG				
Conditions for participation: Taken CU03170/15382 Production planning & stock control and CU03168/15386 Physical distribution.											
Special conditions for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups composed for this) work on the development of the required competencies; mandatory participation in the logistics game (provided by the programme)											
Brief description of the course content: Supply chain management (SCM) is “managing the chain that connects independent customers and suppliers to as it were create a single entity with the goal of creating value and reducing wastage through the voluntary coordination of goals and activities of all organizations in the chain.” More than in “regular” logistics, cooperation between organizations is sought across the borders of organizations, in the own chain or beyond. Due to this all-encompassing chain perspective, the course is also the conclusion of the first two years of study, by reviewing the discussed logistical subareas in the light of the control of goods flows at the chain level.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Work inspection (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X		Written exam	1.2.2, 1.3.1, 1.3.2, 1.3.3, 1.3.4, 1.3.5, 3.1.3	100%	5,5	23	25	26	28

Test no.	Assessment method
1	Individual
Number of contact hours	24

CU70224V1	Title: Lean six sigma voor logistiek				Number of ECs: 2,5	Mandatory: Yes	Language: NL				
CU70225V1	Lean six sigma for logistics						ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: "Lean" refers to eliminating wastage such as excess stock, waiting times and transport. It strives towards maximum added value for the client, by charting and then streamlining the entire chain. The research methods are relatively simple, but very useful in practice. "Six sigma" means that processes are so well controlled that undesired variations (for example in delivery times) are eliminated. A roadmap (DMAIC) using statistical models intelligently allows the researcher to carry out the study in a very structured way. The combination of the two methods – lean six sigma – allows companies to deliver high quality at low cost. This is what the course is about. The research methods of the Theory of Constraints are also examined.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 1 working day after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X		Written final examination	1.3.3, 2.3.1, 2.3.2, 2.3.3, 3.3.1	40%	5,5	23	25	26	28
2	X	X		Reports on assignments	1.1.2, 1.1.3, 1.2.1, 3.3.2	60%	5,5	24	25	27	28

Test no.	Assessment method
1	Individual
2	Partly individual and partly in a group
Number of contact hours	36

CU70226V1 CU70227V1	Title: Smart logistics & Big data NL Smart logistics & Big data INT				Number of ECs: 2,5	Mandatory: Yes	Language: NL ENG				
Conditions for participation: None											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
<p>Brief description of the course content: The logistics world is one in which efficiency and dynamics are essential. Due to the large amount of big data that we have today, major improvements in processes can be achieved quickly. Logistics companies that innovate a lot and continue to renew the supply chain have a huge competitive advantage over companies that lag behind.</p> <p>Big data has therefore become a key factor in the digitization of logistics and production processes. Demand planning, order management and price management can greatly benefit from big data initiatives. Big data ensures that a digitized supply chain can combine transactional data more effectively with real-time process data to enable new forms of connectivity and production. Leaders in this field will be able to discover, interpret and pass on signals in the supply chain to the right person in the organization. In this course practical exercises and cases are used to learn how big logistic tools can be used to perform smart logistical analyzes, so that insight into the organization and / or entire supply chain can be obtained and optimisations can be calculated.</p>											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X		Reports on assignments	1.1.2, 1.1.3, 3.2.1, 3.2.3	100%	5,5	23	25	26	28

Test no.	Assessment method
1	Individual
Number of contact hours	24

CU70228V1	Title: Human logistics 2 – Zorglogistiek				Number of ECs: 2,5	Mandatory: Yes	Language: NL				
CU70229V1	Human logistics 2 – Care logistics						ENG				
Conditions for participation: Taken CU03073/14141 Introduction to international logistics and CU09427/14148 Human logistics 1 – Event logistics.											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: Human logistics concerns the logistical processes of flows of people instead of flows of goods. Examples are hospitals, pop festivals, disasters or sports events. Many principles of “regular” logistics are also very important in Human Logistics, and are easily translated to situations in which flows of people have to be managed. Other aspects are more specific, for example anticipating security problems in the form of an evacuation plan. This second course on Human Logistics discusses logistics in hospitals and other care institutions specifically. Care logistics is part of the Human Logistics field, because it’s largely about the management of flows of patients.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X		Reports on assignments	1.2.4, 2.3.1, 2.3.3	70%	5,5	24	25	27	28
2			X	Assessment	1.2.4, 2.3.1, 2.3.3, 4.2.2	30%	5,5	25	25	27	27

Test no.	Assessment method
1	In a group
2	Partly individual and partly in a group
Number of contact hours	24

Year 2 – Entire semester 4

CU70230V1	Title: Logistics English 5				Number of ECs: 2,5	Mandatory: Yes	Language: ENG				
Conditions for participation: Taken CU22625, CU22626, CU22627 and CU22628.											
Special condition for awarding credits (Tick-off): the student must have successfully carried out an interview (according to the guidelines provided by the lecturer) before he/she is allowed to give a presentation.											
Brief description of the course content: This course at B2+ prepares students to write an essay with convincing arguments and hold a convincing presentation in a professional way.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X		Argumentative writing	4.2.1	40%	5,5	13	14	26	27
2	X			Presentation	4.2.1, 4.2.2	60%	5,5	23/24	23/24	26	27

Test no.	Assessment method
1	Individual
2	In a group
Number of contact hours	24

VCCU70287 VCCU70288	Title: HZ Personality LE 3 HZ Personality LE 4				Number of ECs: 1,25 1,25	Mandatory: Yes *	Language: NL/ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): none											
Brief description of the course content: HZ Personality LE 3 and LE 4 are two courses of 1,25 EC each. This fills in the free composition space in semester 4 which amounts to 2,5 EC in total. It's possible to combine the two courses (2,5).											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Work inspection (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1			X	Justification and reflection	N/A	100%	5,5	N/A	N/A	N/A	N/A

* The obligation is that during 2 years, a total of 5 EC is filled with the courses HZ Personality LE 1 through LE 4. However, students are offered freedom of choice.

Test no.	Assessment method
1	Individual
Number of contact hours	N/A

Year 3 – Semester 5

CU11112V13	Title: Oriënterende stage Internship for professional orientation			Number of ECs: 30	Mandatory: Yes	Language: NL ENG					
Conditions for participation:											
1. Internship documents fulfils requirements											
2. Sufficient EC obtained (see 2.2.8)											
Special condition for awarding credits (Tick-off): Hourly accounting 840 hours (105 days) of which at least 760 hours (95) spent at the internship company.											
Brief description of the course content: During the working internship you'll work on acquiring competencies for the logistics profession in a company. You'll do this by helping with the daily logistics business processes. You'll additionally carry out research. You can think of doing an internship at a transportation company, a warehouse, a web shop, an organization active in Human Logistics and many other kinds of companies.											
Exam no.	Form			Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week	
	M	S	A								
1			X	Assessment professional competencies (portfolio, performance)	1.2.3, 1.2.4, 2.3.1, 2.3.3, 3.3.2, 4.1.1, 4.1.3, 4.2.2, 4.3.1, 5.1.1, 5.1.2, 5.2.1, 5.2.2, 5.3.1, 5.3.2, 5.4.1, 5.4.2	70%	5,5	2	3	4	6
2	X	X	X	Assessment research competencies (report, presentation)	1.1.1, 1.1.2, 1.1.3, 1.2.1	30%	5,5	2	3	4	6

Test no.	Assessment method
1	Individual
2	Individual
Number of contact hours	10

Year 3 – Semester 6

Free Minor. See the HZ minor catalogue for this.

Year 4 – Semester 7

CU05970V10	Title: Logistics Information Systems				Number of ECs: 5	Mandatory: yes	Language: ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): N/A											
Brief description of the course content: Logistics and ICT are inseparably linked. Without fast and reliable information, it's impossible to make the right decisions about the flow of goods. This course examines the information and communication systems used in this, such as Enterprise Resource Planning, Warehouse Management Systems, Transport Management Systems and Advanced Planning Systems. The course is common to all specializations. We are also looking at how to make a good selection of the right software systems for an organization. This course is common to all specializations.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1			X	Functional specifications and package selection report	2.2.4, 2.3.2, 2.3.4, 3.1.5, 3.2.2	50%	5,0 *	44	47	4	7
2			X	Assignment Information Management and Logistics	1.1.2, 1.1.3, 3.2.1, 3.2.3	50%	5,0 *	3	6	9	12

* The course as a whole must be completed with a final mark of 5,5 or higher.

Test no.	Assessment method
1	In a group
2	In a group
Number of contact hours	48

CU15377V4	Title: Voorbereiding afstuderen Logistiek Preparation graduation Logistics				Number of ECs: 2,5	Mandatory: Yes	Language: NL ENG				
Conditions for participation: semester 1 through 5 have been fully completed.											
Special condition for awarding credits (checked off): N/A											
Brief description of the course content: According to the current criteria of the HZ University of Applied Sciences, a graduation thesis must be based on a sound research proposal including theoretical framework. In this course you'll develop your research proposal before starting your internship graduation and the actual research. For support in this, you'll take classes on doing (literature) research, choosing and justifying the right (logistical) research methods and writing a research proposal. The internship company and the research assignment must be officially approved before you can conclude this course. This course is common to all specializations. Completing this course is a condition for being able to begin CU11113 Graduation. The planning weeks below are based on the three fixed starting moments per year for graduation (see 2.2.11).											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X		Research proposal - Planning for starting graduation on 1 February 2020 - Planning for starting graduation on 1 May 2020 - Planning for starting graduation on 1 September 2020	1.1.1	100%	5,5	50 11 26	2 13 28	4 15 33	5 17 35

Test no.	Assessment method
1	Individual
Number of contact hours	24

CU15379V4	Title: Management Development Training				Number of ECs: 5	Mandatory: Yes	Language: ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): at least 80% participation in classes, to under supervision collectively (partly in groups) work on the development of the required competencies											
Brief description of the course content: This course fits in the management learning line of the programme. It offers you the possibility of discovering and developing your strong sides as a (potential) manager and to work on your weaker sides. The course is based on theoretical insights as a substantiation of practically-oriented skill trainings. You'll reflect on your behaviour in the role of manager. The course is common to all specializations.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X		Portfolio	1.3.2, 1.3.5, 3.1.4, 3.3.3	40%	5,5	2	4	5	6
2		X		Written final examination	2.1.1, 2.1.3, 2.2.1, 4.1.3	40%	5,5	51	3	4	5
3		X	X	Assessment meeting in the role of supervisor	2.1.2, 2.4.2, 4.2.2	20%	5,5	37-50	50	51-3	5

Test no.	Assessment method
1	Individual
2	Individual
3	Individual
Number of contact hours	48

CU17009V3	Title: Specialization Supply chain management				Number of ECs: 15	Mandatory: Yes *	Language: ENG				
Conditions for participation: none											
Special condition for awarding credits (checked off): N/A											
<p>Brief description of the course content: This course is the specific component of the Supply Chain Management specialization. Under supervision, you'll research in which way good SCM is carried out in various industries these days. The course includes a number of in-depth workshops on relevant topics. You'll make a portfolio of the various products you deliver and will conclude the course with an assessment. You can only take part in this assessment if your portfolio has been given a passing mark. Part of the assignments is related to the game The Cool Connection. Because the Logistics Engineering programme is billed for the game, every student is asked for a financial contribution.</p>											
Exam no.	Form			Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week	
	M	S	A								
1		X		Portfolio	1.2.2, 1.3.4, 1.3.5, 2.2.3, 2.2.5, 2.3.1, 3.1.1, 3.1.2, 3.1.3, 3.2.1, 3.2.3, 3.3.1	70%	5,5	2	3	4	5
2			X	Assessment	1.3.1, 1.3.2, 1.3.3, 4.2.2, 5.4.1, 5.4.2	30%	5,5	3	3	5	5

* The course is only mandatory for the students of the Supply Chain Management specialization.

Test no.	Assessment method
1	Partly individual and partly in a group
2	Individual
Number of contact hours	100

CU17010V3	Title: Specialization Human logistics				Number of ECs: 15	Mandatory: Yes *	Language: ENG				
Conditions for participation: Taken course CU13927 Human logistics 2 - Care logistics.											
Special condition for awarding credits (checked off): N/A											
Brief description of the course content: This course is the specific component of the Human Logistics specialization. Under supervision, you'll research in which way good human logistics is carried out in various industries these days. This includes areas like defence, humanitarian aid, tourism, etc. Both theory and practice are examined. The course includes a number of in-depth workshops on relevant topics. You'll make a portfolio of the various products you deliver and will conclude the course with a professionally-oriented assessment. Beforehand, you can indicate whether the focus will be on an executive, advisory or managerial role.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X		Portfolio	1.2.2, 1.3.4, 1.3.5, 2.2.3, 2.2.5, 2.3.1, 3.1.1, 3.1.2, 3.1.3, 3.2.1, 3.2.3, 3.3.1	70%	5,5	2	3	4	5
2			X	Assessment	1.3.1, 1.3.2, 1.3.3, 4.2.2, 5.4.1, 5.4.2	30%	5,5	3	3	5	5

* The course is only mandatory for the students of the Supply Chain Management specialization.

Test no.	Assessment method
1	Partly individual and partly in a group
2	Individual
Number of contact hours	100

CU17011V3	Title: Specialization Maritime logistics				Number of ECs: 15	Mandatory: Yes *	Language: ENG				
Conditions for participation: Taken course CU17441/17442 Maritime logistics and law (or equivalent).											
Special condition for awarding credits (checked off): N/A											
Brief description of the course content: This course is the specific component of the Maritime Logistics specialization. Under supervision, you'll research in which way good maritime logistics is carried out in various industries these days. Think of the ship broker, the stevedore, the shipping company, etc. Both theory and practice are examined. The course includes a number of in-depth workshops on relevant topics. You'll make a portfolio of the various products you deliver and will conclude the course with a professionally-oriented assessment. Beforehand, you can indicate whether the focus will be on an executive, advisory or managerial role.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1		X		Shipping Logistics Assignment	1.2.2, 1.2.3, 1.3.1, 1.3.2, 1.3.3, 1.3.4	30%	5,5	44	46	50	3
2		X		Ports & Terminals Assignment	1.3.5, 2.2.3, 2.2.5, 2.3.1, 3.2.3	30%	5,5	2	3	4	5
3		X		Freight & Forwarding Assignment	3.1.1, 3.1.2, 3.1.3, 3.2.1, 3.3.1	30%	5,5	2	3	4	5
4			X	Assessment	4.2.2, 5.4.1, 5.4.2	10%	5,5	3	3	5	5

* The course is only mandatory for the students of the Maritime Logistics specialization.

Test no.	Assessment method
1	Partly individual and partly in a group
2	Partly individual and partly in a group
3	Partly individual and partly in a group
4	Partly individual and partly in a group
Number of contact hours	100

VCCU70481V1 VCCU70482V1		Title: HZ Personality LE 5 HZ Personality LE 6			Number of ECs: 1,25 1,25		Mandatory: Yes *		Language: NL/ENG		
Conditions for participation: none											
Special condition for awarding credits (checked off): none											
Brief description of the course content: HZ Personality LE 5 and LE 6 are two courses of 1,25 EC each. This fills in the free composition space during year 4 which amounts to 2,5 EC in total. It's possible to combine the two courses (2,5).											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Work inspection (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1			X	Justification and reflection	N/A	100%	5,5	N/A	N/A	N/A	N/A

* The obligation is that during 4 years, a total of 2,5 EC is filled with the courses HZ Personality LE 5 and LE 6. However, students are offered freedom of choice.

Test no.	Assessment method
1	Individual
Number of contact hours	N/A

Year 4 – Semester 8

CU11113 V12	Title: Graduation				Number of ECs: 30	Mandatory: Yes	Language: NL				
Conditions for participation:											
<ul style="list-style-type: none"> The student has fully completed semester 1 through 5 The student obtained at least 52,5 EC in semester 6 and 7 The internship company and assignment have been approved The student successfully completed the course CU15377 Preparation graduation Logistics, which means that his/her research proposal was approved. 											
Special conditions for awarding credits (checked off): Hourly accounting 840 hours (105 days), of which at least 760 hours (95 days) at the internship company.											
Brief description of the course content: Carrying out a logistics graduation thesis: a complex logistical practical assignment at the final level of independent research and in doing so choosing relevant methodologies. Note: the planning below assumes a regular start of the graduation thesis on 1 February 2019.											
Exam no.	Form				Content	Weighting factor	Minimum mark	Planning exam in week	Inspection of work (< 10 working days after receiving mark)	Retake scheduled in week	Inspection of retake in week
	M	S	A	Form							
1	X	X		Assessment professional competencies (portfolio, performance)	4.1.1, 4.1.2, 4.2.2, 4.3.1, 4.3.2, 5.1.1, 5.1.2, 5.2.1, 5.2.2, 5.3.1, 5.3.2	30%	5,5	25-26	26-27	34	35
2	X	X		Assessment research competencies (research proposal, report, presentation & defence)	1.1.2, 1.1.3, 1.2.1, 1.2.2, 1.2.3, 1.2.4, 1.3.1, 1.3.2, 1.3.3, 1.3.5, 2.3.1, 2.3.2, 2.3.3, 2.4.1, 2.4.3, 3.3.2, 4.2.1	70%	5,5	25-26	26-27	34	35

Test no.	Assessment method
1	Individual
2	Individual
Number of contact hours	15

2.2.6. HZ Personality (art 3.12 HZ EER)

2014-2015 Cohort and before

For the students who started the Logistics Engineering programme in the 2014-2015 academic year and before, a free composition space of at least 2,5 and at most 7,5 EC is reserved in the programme. Students who started in 2014-2015 cannot be obliged to take free composition courses. In that case, they take (other) courses fitting the programme's educational content. *The Free Composition Course Student Manual, September 2014, HZ University of Applied Sciences* applies to this category of students.

2015-2016 Cohort

For the students who started the Logistics Engineering programme in the 2015-2016 academic year, the free composition space is 7,5 EC. Students who started the programme in the 2015-2016 academic year are obliged to take free composition courses. *The HZ Personality Student Manual, 2015, HZ University of Applied Sciences* applies to this category of students, with the understanding that a second foreign language can also be chosen (see the arrangement regarding the international obligation below).

2016-2017, 2017-2018, 2018-2019 and 2019-2020 Cohorts

For the students who started the Logistics Engineering programme in or after the 2016-2017 academic year, the free composition space in the programme amounts to 7,5 EC. Free composition courses are mandatory for these students. *The HZ Personality Programme Manual, 2016-2017 or 2017-2018, 2018-2019 or 2019-2020* applies to them, with the understanding that only 7,5 of the total of 10 EC are filled in in the way described there (or with a second foreign language; see the arrangement regarding the international obligation below). The other 2,5 EC are filled in with the two mandatory foundation courses CU70121/70122 and CU70151/70152 (see 2.2.3) which are especially geared towards personal development.

Positioning free composition space

The educational programme of Logistics Engineering doesn't have a free composition space in year 1 and year 3. Year 2 includes a free composition space amounting to 5 EC in total and in year 4, it amounts to 2,5 EC. The 7,5 EC in total are filled in with the six courses HZ Personality LE 1 through LE 6, each amounting to 1,25 EC.

International obligation

The student must fulfil an international obligation during the Logistics Engineering programme. This can be filled in by participating in the English-language education program or to do the orienting internship (3rd year), the free minor or the graduation internship abroad. The student can however also fulfil the international obligation by using the free composition space:

- In total obtain 2,5 EC of a second foreign language (in addition to the mandatory English courses) or
- In total obtain 2,5 EC with VCCU (HZ Personality) courses like teaching assistant abroad or
- In total obtain 2,5 EC with VCCU (HZ Personality) courses as a study coach of an international Logistics Engineering student.

The last possibility is that the student finds an equivalent alternative for international development himself/herself, and submits this to the Examination Committee for approval.

2.2.7. Specializations (art 3.10 HZ EER)

Three specializations are offered in semester 7: Supply chain management, Human logistics and Maritime logistics. These specializations have three courses in common: CU05970, CU15377 and CU15379. Furthermore, there is a free composition space (in the context of the HZ Personality Programme) of 2,5 EC in the common component of semester 7.

In addition to this common component of 15 EC, each specialization has a specific course of 15 EC: respectively CU17009, CU17010 and CU17011. See 2.2.5 Year 4 – Semester 7 for details. There are no additional rules for admission to the specializations.

 2.2.7a Addition for the programmes involved in the sector-wide conversion in the Technology sector
 N/A

2.2.8 Internship (art. 3.9 HZ EER)

The student cannot begin the CU11112 Internship for professional orientation before he/she has fulfilled the following conditions: the student obtained the foundation diploma and at least 37,5 EC in semester 3 and 4.

The student looks for a suitable internship company and an adequate assignment himself/herself. The Internship for professional orientation CU11112 consists of at least 95 work days at the internship company (of at least 105 internship days = 840 hours), which are mainly spent on carrying out logistical activities at a third-year hbo level, and additionally on carrying out problem-oriented research (advice). The student reports on the results both in writing and orally. The internship results, performance, portfolio and the reports are evaluated.

Exam no.	Form			Form	Weighting factor	Minimum mark
	M	S	A			
1			X	Assessment professional competencies (portfolio, performance)	70%	5,5
2	X	X	X	Assessment research competencies (report, presentation)	30%	5,5

2.2.9 Minor (art. 3.8 HZ EER)

The Logistics Engineering programme doesn't have any additional admission requirements for taking a minor. Specific conditions per minor are described in the Minor Guide.

The following additional requirements apply for participation in a "Choose Custom" minor (minors offered by other Dutch universities):

- The propaedeutic certificate has been obtained
- At least 45 ECTS in semesters 3 and 4 is obtained
- The orienting internship has been successfully completed, or an exemption has been granted by the Examination Committee.

For international minors, see 2.2.10.

2.2.10 Participation in international exchange programme (art 4.5 HZ EER)

The following additional requirements for participation in an international exchange programme apply to the Logistics Engineering programme.

- The propaedeutic certificate has been obtained
- At least 45 EC were obtained in semesters 3 and 4
- Completion of the courses English CU10642/22627 and CU10643/22628 in semester 3
- The Internship for professional orientation was concluded successfully, or exemption was given by the Sub-Examination Committee
- The courses to be taken abroad were approved by the Examination Committee.

If the international exchange programme takes place in an English-speaking country, the successful completion of course CU07354/CU70230 (or an equivalent English course at B2) level is required.

2.2.11 Graduation (art. 3.9 OER)

The student cannot begin CU11113 Graduation before having fulfilled the following conditions:

- completed semester 1 through 5
- obtained at least 52,5 EC in semester 6 and 7
- internship company and assignment have been approved
- successfully completed the course CU15377 Preparation Logistics Graduation.

The student looks for a suitable graduation company and an adequate assignment himself/herself. These must fit the specialization chosen in semester 7. The graduation assignment must as such be a suitable application of the knowledge and skills acquired in the specialization. If a student takes the international programme, the research proposal, the final report, the portfolio and the final presentation/defence are in English.

During the 2019-2020 academic year, there are three official starting times for the graduation internship, namely 1 September 2019, 1 February 2020 and 1 May 2020. The next starting time is 1 September 2020. The graduation internship consists of at least 95 work days at the internship company (of at least 105 graduation days = 840 hours), which are primarily spent on carrying out research at hbo/bachelor final level. The student reports on the results both in writing and orally. The results, performance and portfolio are evaluated.

If the final report and/or the portfolio is not given a passing mark, the student is not allowed to give the final presentation and he/she is referred to the (one) retake for the final report and portfolio. If the final presentation is not given a passing mark, this too may be retaken once.

After the official starting date of the graduation internship, the student has 1 full year to fully complete the course CU11113. If this is not possible, the student must choose a new graduation assignment and furthermore submit a new research proposal for this, which must both be approved before the official starting time of the new graduation internship.

Exam Nr	Form			Form	Weighting factor	Minimum mark
	M	S	A			
1	X	X		Assessment professional competencies (portfolio, performance)	30%	5,5
2	X	X		Assessment research competencies (report, presentation & defence)	70%	5,5

2.2.12 National test
N/A

2.2.13 Transitional arrangement (art. 6.2 paragraph 11 HZ EER) In the specific case that a student is due to changes in the curriculum not able to fully complete all required courses for an enrolling cohort, the programme will formulate an equivalent alternative for substituting courses in his/her study plan and submit this to the Examination Committee for approval.

2.3. Study recommendation

2.3.1 Elaborate on conditions for registration for programme after negative binding study recommendation (art. 8.1, paragraph 9 HZ EER)

The student may not enrol again for the Logistics Engineering programme at the HZ University of Applied Sciences. There is no other programme for which the student would not be able to enrol following a negative binding study recommendation for Logistics Engineering.

3.1 Establishment

3.1.1 The duration of the implementation regulation is the same as the duration of the HZ Education and Examination Regulation 2019-2020.

3.1.2 These Course and Examination Regulations were established by the Board on 27-08-2019

Appendix. The sub-tasks and learning objectives of Logistics Engineering

The partial tasks (two-digit) were determined in March 2013 by the National Logistics Platform. The study program itself has derived three-digit learning objectives, which are referred to in the course tables.

1. Developing logistics policy.

1.1. Gets insight through analysis into issues in the field of logistics.

1.1.1. You can formulate a problem statement, conduct source research, set up a (logistical) investigation and record this in a research proposal.

1.1.2. You can collect the required data and process it appropriately (so that meaningful interpretation becomes possible), monitor progress and quality of implementation, and adjust if necessary.

1.1.3. You can give meaning to the found and processed data, and report on the (logistics) investigation.

1.2. Investigates a (technical) logistics issue, designs a process or methodology and advises on this.

1.2.1. You can record and analyse existing processes and methodologies with logistical research methods, concepts, models and simulations.

1.2.2. You can determine the goals for a logistics process, taking into account the corporate strategy and interests outside the organization and within (Marketing, Production, Finance etc.), and translate these into measurable performance indicators.

1.2.3. You can propose alternative solutions for the (technical) design of new - or the redesign of existing - logistics processes and methodologies, using the logistics concept.

1.2.4. You can weigh up the advantages and disadvantages (both quantitative and qualitative) of alternative logistics solutions, in terms of the logistics concept, and formulate advice for the most suitable solutions.

1.3. Contributes to the development and organization of chains and networks in connection with technical developments.

1.3.1. You can identify and analyse the strengths and weaknesses of a logistics network.

1.3.2. You can identify and analyse the external opportunities and threats for a logistics network, and oversee the consequences of relevant developments (of a logistical, technical or other nature).

1.3.3. You can select examples from practice ("best practices") and from the applied scientific literature that can serve as a model for the design principles of a logistics network.

1.3.4. You can formulate the future requirements and main characteristics of a logistics network and advise management on this.

1.3.5. You can elaborate (provided) strategic decisions about a logistics network into objectives and action plans for the design of the subsystems (links).

2. Management of work in logistics processes.

2.1. Manages operational processes in the field of logistics (management).

2.1.1. In the role of team leader or project manager you can make, monitor and adjust operational decisions within small (logistics) teams.

2.1.2. You can manage small (logistics) teams by instructing, motivating and coaching the members.

2.1.3. You can support senior (logistics) management in formulating and implementing personnel policy.

2.2. Plans and prepares (technically), elaborates and concretises, budgeted and contracts logistics activities.

2.2.1. You can organize the internal work within a small (logistics) team, including tasks, work procedures and consultation structures.

2.2.2. You can structure the external reconciliations of a small (logistics) team, among other things with formally established agreements on information exchange and mutual obligations.

2.2.3. You can make “make / do-or-buy decisions”, taking into account strategic, financial and other motives.

2.2.4. You can specify the required logistics systems, resources, IT tools and advisory services (or have them specified) and purchase them based on contracts.

2.2.5. You can set plans and budgets for internal and external stakeholders, and have these monitored and adjusted.

2.3. Can organize, control and improve logistics processes.

2.3.1. By working out the logistics concept you can make fundamental choices for the design of certain logistics processes, making use of knowledge about comparable processes (transfer).

2.3.2. You can elaborate logistics control systems in more detail and derive functional requirements from them for supporting IT systems.

2.3.3. You can work out the working methods, technical tools, location and layout of logistics processes in more detail, including the calculation of capacities, investments, costs and revenues.

2.3.4. You can maintain logistics processes, systems, resources and IT tools (have them maintained), monitor them and, if necessary, have them adjusted or redesigned.

2.4. Supports in the development, implementation and evaluation of change processes within organizations.

2.4.1. You can write a project plan and an implementation plan for the (re) organization of logistics processes, and then have them executed, monitored and adjusted.

2.4.2. You can conduct behavioural changes within a small team through coaching.

2.4.3. You can determine the organizational effects of deployed change processes and adjust them if necessary.

3. Performing logistics operations.

3.1. Is responsible for the implementation and management of logistics operations.

3.1.1. You can have the flows of goods and people worldwide - and the related flows of information and money - run systematically, controlled and in accordance with legal requirements.

3.1.2. You can translate set goals and conditions for customer service, costs, investments, safety etc. into measurable standards per process step, such as lead time, process reliability, stock level, capacity utilization rate etc.

3.1.3. You can make predictions and schedules with a long, medium and short horizon for purchasing, transport, production, supply (and other activities controlled by logistics); follow the schedules and adjust according to the PDCA cycle.

3.1.4. You can coordinate the decisions of the various internal and external stakeholders and have them coordinated.

3.1.5. You can do the preparation, implementation, assessment and follow-up of the operational procurement of goods, IT tools and services.

3.2. Recognizes problems within logistics operations, establishes diagnoses and corrections and takes care of their implementation.

3.2.1. You can identify (measure) incidental deviations from set standards in time, analyse the causes, devise measures and set priorities.

3.2.2. You can convince and instruct those involved to implement the measures provided for in problem situations.

3.2.3. You can collect data about the realization and record it in spreadsheets, convert it into logistical performance indicators (and other relevant information), and prepare management reports.

3.3. Realizes and implements new processes or methodologies in (technical) logistics operations.

3.3.1. You can identify systematic deviations from set standards in time, analyse the structural causes and develop process improvements.

3.3.2. You can continuously optimize operational processes (for example in warehouses and transport) with logistical improvement methods such as Lean six sigma and the Theory of constraints.

3.3.3. You can implement process improvements in close cooperation with those involved.

4. Social and communicative sub-competence Logistics.

4.1. Collaborates in a professional environment and thinks along with the goals and organization of the organization with the characteristics of multidisciplinary, interdisciplinarity, collegiality and leadership.

4.1.1. You can work professionally within teams and consultative bodies with professionals from different functions, departments and organizations.

4.1.2. You can initiate and maintain professional relationships with customers, suppliers, consultants and other external parties.

4.1.3. You can consult in the role of both manager and employee about the goals and structure of the logistics organization.

4.2. Communicates effectively and professionally in the current business language and in relevant professional situations at all levels.

4.2.1. You can express yourself orally and in writing clearly and correctly in a business environment in your own language and in English, in accordance with the applicable business standards.

4.2.2. You can tailor your way of business communication (during consultations, meetings, presentations, reports, etc.) to the level of your conversation partner and adapt to the characteristics of the professional situation.

4.3. Takes into account (international) cultural differences.

4.3.1. You can take into account differences in organizational culture when contacting people from other departments or companies.

4.3.2. You can take cultural differences into account when dealing with people from other national, ethnic or religious backgrounds.

5. Self-managing sub-competence Logistics.

5.1. Controls and regulates own development in the field of learning.

5.1.1. You can determine what the requirements for a logistic function in various types of organizations entail and what steps you must take to meet them.

5.1.2. You can plan, execute and adjust your own development trajectory to a certain logistic function level.

5.2. Has a professional attitude.

5.2.1. You can state what it means to be a logistics professional.

5.2.2. You can meet the generally accepted rules of conduct of the logistics profession during your work and during internships.

5.3. Acts professionally, ethically and (socially) responsibly.

5.3.1. You can take the moral aspects of your actions into account in your work and study.

5.3.2. In your work and study you can take into account the consequences of your actions for people, the environment and society.

5.4. Contributes to the development of his or her profession across the board.

5.4.1. You can state how the future development of logistics is related to that of society, (applied) science, technology and business.

5.4.2. You can think along and talk about the future of the logistics profession, logistics activities and (applied) logistics science.