

**Study programme section of the Students' Charter  
with the 2022-2023 Teaching and Examination Regulations  
of the Bachelor's programmes at Fontys School for Technology and  
Logistics**

Study programme	Abbreviation	Programma code	Language classes foundation phase	Language classes main phase
B Mechatronics	MEC	30026	Dutch	Dutch
B Information Technology	ICT	34479	Dutch German English	English
B Industrial Design Engineering	IPO IDE	34389	Dutch English	Dutch English
B Logistics Management	LM	35522	Dutch German English	English
B Logistics Engineering	LE	34390	Dutch German English	English
B Mechanical Engineering	WTB	34280	Dutch	Dutch

The study programme's section of the Students' Charter was adopted by the institute's director on 20 September 2022, after obtaining the IPC's consent (art 32, 33 and appendix 6 excluded) on 23 May and on 17 June 2022 (art 32, 33 and appendix 6), and the PC's consent on 25 May 2022 (art 32, 33 and appendix 6 excluded) and on 15 June 2022 (art 32, 33 and appendix 6).

The teaching and examination regulations of the study programme expand on the general section of the teaching and examination regulations of Fontys Bachelor's programmes.

This general section for the 2022-2023 academic year was established by the Executive Board on 14 December 2021, following the consent of the students' section of the CPC, which was given on 7 February 2022.

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## A – Teaching and Examination Regulations

### Section 1 General

#### Article 1 Definitions

Academic year	The period from 1 September up to and including 31 August of the following year.
Advice regarding the continuation of studies	Advice given to students at the end of the first year of the foundation phase of a Bachelor's programme regarding the continuation of their studies either with the programme or elsewhere. This advice may entail a binding rejection (binding negative study advice).
Assessment	Generic term for tests aimed at assessing a student's competencies in a professional situation that is as authentic and realistic as possible.
Assessor	An examiner that grades the student's progress in acquiring the required competencies.
CAA	Centre for Administrative Activities. The CAA is the internal partner within Fontys of the representative and participatory bodies and their discussion partners with respect to optimising how these bodies function.
Certificate	The certificate as referred to in Section 7.11 of the Dutch Higher Education and Research Act ( <i>Wet op het Hoger Onderwijs en Wetenschappelijk Onderwijs</i> , WHW).
CPC	Central Participation Council
Cohort	The group of students who are enrolled for the first time in the foundation year of a study programme on the same reference date to which the prevailing Teaching and Examination Regulations (TER) apply. For students who enrol in a higher year, cohort membership is determined on an individual basis.
Competency	A cluster of related knowledge, skills and attitudes that influences a substantial part of a person's job, is related to the performance of the job, can be measured and tested against accepted standards and can be improved through training and development.
Component test	If an interim examination consists of several tests, each of those tests is referred to as a component test.
Coordinating institute	The coordinating institute is the Fontys Institute which bears final responsibility for the development, implementation, assessment and improvement of a minor programme.
Credit	One credit equals 28 standard study-load hours. Students are awarded credits on passing the interim examination of a unit of study. The international term for credits is ECTS credits (EC's).
Education components	The courses offered to students to help their learning process.
CROHO	Central Register of Higher Education Study Programmes, which is a register of all study programmes. Students that pass the interim examinations of a study programme registered in CROHO are entitled to an official higher professional education certificate with the associated degree (Associate degree, Bachelor or Master). The CROHO will be replaced by the RIO in 2022.
Deficiency	Any required prior qualification(s) a student lacks.
Diploma supplement	Document drawn up in accordance with a European format that is added to the certificate and states the nature, level, context, content and status of the study programme.
Dual-study programme	A dual-study programme is organised in such a way that education is alternated with one or more periods of professional practice related to the study programme. The study programme therefore consists of an educational segment and a practical segment, both of which are integral parts of the study programme.
DUO	Short for Dienst Uitvoering Onderwijs, a government agency charged with implementing education legislation and regulations.
Diploma with subject combination	Former senior general secondary education ( <i>HAVO</i> ) or pre-university education ( <i>VWO</i> ) diploma based on subject combinations. These diplomas were issued before the <i>HAVO</i> and <i>VWO</i> profiles were introduced (from 1998).
ECTS	European Credit Transfer System. The system that is used to express credits in order to facilitate international comparison. See also: credits.
Elite athletes scheme	Scheme for elite athletes that specifies which students are eligible to benefit from it and the facilities that they may use under it.

EVC (RPL)	Erkenning van eerder Verworven Competenties (Recognition of Prior Learning).
Examination	Assessment administered by the Examination Board to determine whether students have successfully completed the educational components of a study programme or the foundation-year phase. The final examination may also include a supplementary assessment conducted by the Examination Board.
Examination Appeals Board	The Board as referred to in Sections 7.60 up to and including 7.63 of the WHW and Articles 45 and 46 of the Students' Charter. The organisation, duties and powers of the Board are laid down in the Rules of Procedure adopted by the Examination Appeals Board and approved by the Executive Board.
Examination Board Examiner	The board of persons referred to in Section 7.12 of the WHW. Member of staff or external expert not employed by the institution who has been designated by the Examination Board to administer examinations and assess the results thereof.
Executive Board	The administrative body of Fontys University of Applied Sciences, as described in the articles of association and the WHW.
Executive institute	A Fontys institute responsible for the execution of a minor.
Exemption	Full or partial exemption from meeting enrolment and/or admission conditions and/or sitting interim examinations.
Exit qualifications	Qualifications students must have on completing the study programme.
Fontys minor	A minor open to all Fontys students, so long as they meet any admission criteria for the minor, with a focus on overarching and distinctive themes.
Foundation year	First phase in a Bachelor's programme.
Fraud	Any act (including plagiarism ) or omission that either partially or fully impairs the correct assessment of a person's knowledge, understanding, skills, competencies, professional attitude, powers of reflection etc.
Full-time study programme	A full-time study programme is a study programme whose structure is such that students are assumed not to participate in any activities other than academic activities.
Hardship clause	A provision in a law or regulation that makes it possible to deviate from regulatory provisions in favour of the student or external student.
He/him	He/him is taken here to refer to men, women and individuals who do not identify as either of these options.
IELTS	International English Language Teaching System, a tool used to determine a student's command of the English language.
Institute	The operational unit at Fontys that is, in particular, responsible for organising Fontys's core competencies and that executes the primary processes, i.e. the statutory tasks as referred to in Section 1.3, paragraphs 3 and 1.9(1) of the WHW.
Institute Director	The staff member charged with running a Fontys institute.
Institution	The Fontys Universities of Applied Sciences.
Intake assessment	Portfolio assessment conducted at the student's request to validate previous learning experiences prior to enrolment in the study programme. A fee covering the costs is charged for an intake assessment.
Intake interview	Interview conducted at the student's request prior to the start of the study programme if the student believes that he has competencies acquired previously. An intake interview comprises a general assessment from which no rights can be derived by a student.
Interim examination	An examination of the knowledge, understanding, skills and/or competencies of a student required to conclude a unit of study, including an assessment of the results of such an examination ( <i>Section 7.10(1) of the WHW</i> ). An interim examination may consist of one or more component tests.
IPC	Institute Participation Council
Main subject	A specific definition of the curriculum within a programme, which begins immediately from year 1 or following the foundation year. (
Major	That part of the Bachelor's programme with a study load of 210 credits that contributes to the competencies associated with the programme and that is directly related to the study programme(s)'s registration in the RIO.
Minor	Programme of optional subjects within a Bachelor's programme with a study load of 30 credits that contributes to generic or specific competencies.
Minor regulations	Regulations that describe the content, the education components, the testing and the completion of a minor. The regulations of all minors offered by Fontys can be found on the Fontys website ( <a href="http://www.fontys.nl/minors">www.fontys.nl/minors</a> ). The regulations of

	the minors associated with a particular study programme have been included as an appendix of the study programme's TER.
Nt2 diploma	Diploma of the Nt2 official state examination in Dutch as a second language, of which programme II is considered to be the guideline for admittance to higher education.
Occupational requirements	The legal requirements to which the practice of a particular profession is subject. A study programme aimed at such an occupation will prepare students to meet the relevant requirements. ( <i>Section 7.6 of the WHW</i> ).
Part-time study programme	A part-time study programme is a study programme whose structure is such that the student is able to participate in supplementary activities, either work-related or educational, alongside the study programme.
Portfolio	A collection of evidence, digital or otherwise, with which students can demonstrate that they master the competencies of a particular study programme.
Post-foundation year phase	Second phase of a Bachelor's programme.
Principle	All study programmes offered are based on one of the following principles: non-denominational private education (NPE), Roman Catholic (RC), Protestant Christian (PC) or a combination of non-denominational private education, Roman Catholic and Protestant Christian (NPE, RC, PC).
Profiling Fund Board	Board charged by the Executive Board with implementing the Profiling Fund scheme, formerly known as the FSS Board.
Profiling Fund Scheme	Scheme for the granting of support to students in the form of graduate funding, committee member grants or attendance fee from the profiling fund, now known as the <a href="#">Profiling Fund Scheme</a>
PC	Opleidingscommissie (Programme Committee, PC), a committee established for a particular study programme of an institute referred to in Section 10.3c of the Act (see the <a href="#">Regulations on the Participation Councils and Degree PC's</a> ).
RIO	The register (Registratie Instellingen en Opleidingen) that will replace existing registers such as the CROHO and the BRIN.
Tailored programme	Special programme which differs from the standard programme.
Teaching period	Period in the academic year during which education components are organised. A teaching period is referred to as a study quarter in the Fontys annual calendar.
TER	Teaching and examination regulations. The TER consists of a general section for all study programmes offered by the Fontys Universities of Applied Sciences as well as information specific to individual study programmes. The TER forms a part of the study programme section of the Students' Charter.
Test	Activity used to assess whether a student has certain knowledge, insight, skills and/or competencies.
Student	A person who is enrolled in the institution, as referred to in Sections 7.32 up to and including 7.34 of the WHW.
Student counsellor	Staff member appointed by the Executive Board who is responsible for looking after the students' interests, providing assistance when problems occur and providing information and advice. The student counsellor is part of the Student Facilities Service (Dienst Studentenvoorzieningen).
Study Career Centre	Service provided by the Student Facilities Service (Dienst Studentenvoorzieningen) to help students with issues involving admission, transfer to another study programme/institute or the termination of their studies.
Students' Charter	The <a href="#">charter</a> containing the rights and obligations of students, divided into an institution-specific section and a study programme-specific section.
Student entrepreneur scheme	<a href="#">Scheme</a> which is intended to help Fontys students who are deemed student entrepreneurs to combine entrepreneurship and study.
Student coach	Coach who provides guidance on issues relating to student progress, including those that stimulate a student to develop a personal and professional identity, focusing on a student's talents and personal leadership qualities.
Student coaching	System of guidance that focuses on the development of the individual student. It stimulates students to reflect on their own development as future practitioners of the profession and to take responsibility for their own development.
Study check advice	Advice provided to a prospective student who has participated in the study check with regard to his choice of Bachelor's.

Study check	The activity offered by Fontys whereby the prospective student is given advice with respect to his choice of study programme. The study check consists of at least two components: a digital questionnaire and a consultation to discuss the results of the questionnaire.
Study load	The standardised time investment expressed in units of 28 study load hours related to a study programme.
Study programme	A coherent totality of education components aimed at achieving the well-defined objectives in the area of knowledge, understanding and skills which the person completing the study programme should possess. Every study programme is recorded in the RIO.
Study programme minor	A minor which can only be taken by students from a specific domain or study programme and which highlights one particular theme.
Study programme profile	The entire set of final qualifications for which the study programme provides training or, in other words, the professional competencies expected of a beginning professional.
Unit of study	Part of a study programme that is concluded with an interim examination as referred to in Section 7.3(2) of the WHW or an additional assessment carried out by the Examination Board, as referred to in Section 7.10(2) of the WHW. Units of study may relate to the assessment of one or more competencies, a component of competencies (knowledge, understanding, skills, attitude) or a combination of competencies or of a minor. Students are awarded the relevant credits on passing the interim examination for the unit of study.
WEB	Adult and Vocational Education Act ( <i>Wet Educatie en Beroepsonderwijs</i> , WEB; Bulletin of Acts and Decrees 507, 1995, and later supplements and amendments).
WHW	The Dutch Higher Education and Research Act ( <i>Wet op het Hoger Onderwijs en Wetenschappelijk Onderzoek</i> , WHW; Bulletin of Acts and Decrees 593, 1992, and later supplements and amendments).

## Section 2 Admission to a Bachelor's programme

### Article 2 Required prior qualifications

1. Only prospective students with diplomas awarded on completing pre-university education (VWO) or senior general secondary education (HAVO), with profiles, or senior vocational education (MBO) in middle management as well as prospective students that have completed specialist training or a vocational training programme designated by a ministerial regulation may be admitted to a Bachelor's programme (Section 7.24 of the WHW. Additional conditions for admission apply if a shortened programme is offered. Those conditions are set out in Article 7.
2. Prospective students with a certificate awarded on completing a foundation year or passing the final examination of a higher professional education (HBO) or academic higher education (WO) study programme are also entitled to be admitted to a Bachelor's programme at a university of applied sciences. Prospective students must, however, also meet any applicable requirements regarding their previous qualifications (paragraph 4) and any other additional requirements imposed (paragraph 5). (Section 7.28 of the WHW).
3. All citizens that have access to education offered by research universities or universities of applied sciences in a country that has ratified the Convention on the Recognition of Qualifications concerning Higher Education in the European Region may also be admitted to a Bachelor's programme, without prejudice to the provisions in paragraphs 4 and 5 of this article and the provisions of Article 3.
4. Dutch previous qualifications: The previous qualifications of prospective students seeking enrolment in a Bachelor's programme are subject to the following additional requirements in respect of HAVO and/or VWO diplomas and MBO diplomas.
  - a. The following additional educational entry requirements apply to prospective students seeking admission on the basis of a HAVO or VWO diploma (Section 7.25(1) of the WHW). Prospective students who do not have the required subject cluster or did not take the right subject may be admitted provided an assessment conducted before the commencement of the study programme demonstrates that, in terms of the subject matter, the prospective student concerned meets similar requirements. (Section 7.25(5) of the WHW.). The requirements to be met by the prospective student are as follows:



Study programme	Profile			
	Culture and Society	Economics and Society	Nature and Health	Nature and Technology
<b>Mechatronics, Mechanical Engineering</b>				
havo-profile	-	-	Physics, or Nature, Life & Technology (NLT), or Research & Design (O&O)	+
vwo- profile	-	Physics	Physics, or Nature, Life & Technology (NLT), or Research & Design (O&O)	+
<b>Industrial Design Engineering (IPO &amp; IDE)</b>				
havo- profile	-	Physics	Physics, or Nature, Life & Technology (NLT), or Research & Design (O&O)	+
vwo- profile	-	+	+	+
<b>Information Technology</b>				
havo- profile	+	+	+	+
vwo- profile	+	+	+	+
<b>Logistics Management</b>				
havo- profile	(Economics or Management & Organisation) + (Maths a or Maths b)	+	Economics or Management & Organisation	Economics or Management & Organisation
vwo- profile	econ of m&o	+	Economics or Management & Organisation	Economics or Management & Organisation
<b>Logistics Engineering</b>				
havo- profile	-	+	+	+
vwo- profile	-	+	+	+

+ = automatically admissible, - = not admissible

- b. Prospective Students who hold an MBO level 4 diploma have the right to admission if the diploma is in a related sector (Section 7.24(3) of the WHW). Students who do not hold an MBO level 4 diploma in a related sector may be admitted if it can be established by means of an assessment conducted before the study programme commences that they have satisfied requirements that are commensurate in terms of content (Section 7.25(5) of the WHW). Domains that are deemed not to be related are:

- MBO domain Technology and the Processing Industry for the HBO sector Economy
- MBO domain Trade and Entrepreneurship for the HBO sector Healthcare
- MBO domain Trade and Entrepreneurship for the HBO sector Technology
- MBO domain Economics and Administration for the HBO sector Healthcare
- MBO domain Economics and Administration for the HBO sector Technology
- MBO domain Care and Wellbeing for the HBO sector Economy
- MBO domain Food, Nature and Living Environment for the HBO sector Economy

c. Admission requirements German previous qualifications:

Study programme	Fachhochschulreife	Abitur
All	+ (theoretical)	+

5. There are no additional requirements.
6. Prospective students who are 21 or older at the start of the study programme and do not meet the requirements regarding their previous qualifications and have not been exempted from the requirements may still be eligible for exemption after taking an entrance examination. (Also see Article 3(5).) (Section 7.29 of the WHW.)
- The aim of this examination is to determine the prospective student's suitability to take part in the Bachelor's programme as well as the student's command of the Dutch language or the English language, if the prospective student opts for an English-taught study programme.
- The entrance examination consists of two parts.

The entrance examination consists of two parts:

- An intellectual abilities test to assess if the prospective student has the required working skills and intellectual abilities at higher professional education (HBO) level. A stanine total score of 4 or higher is required to pass this part of the test.
  - A language test to assess the prospective student's command of Dutch or English compared to the required 3F (B2) level.
- Prospective students taking the entrance examination for students aged 21 or over (hereinafter the '21+ entrance examination') for a Dutch-taught study programme may

request an exemption for the Dutch language test if they have already obtained a recognised Nt2 certificate or a certificate for Dutch language proficiency at the MBO 4, HAVO or VWO level granted by a prior degree programme.  
Prospective students who register for the 21+ entrance examination for an English-taught programme must provide a TOEFL, IELTS or other accepted<sup>1</sup> certificate.

Prospective students will be notified of the results of the entrance examination within two weeks.

A supplementary assessment will be conducted:

- to assess if prospective students meet the relevant additional requirements (see Article 2, paragraph 5);
- to allow prospective students to demonstrate that they meet the special further educational entry requirements (see Article 2, paragraph 4, under b);
- to allow prospective students to demonstrate sufficient subject-specific knowledge by completing the following assessment: ... (see Article 2, paragraph 4, under a).

If a prospective student fails the 21+ entrance examination, they can retake it after one year.

The result of a passed 21+ entrance examination will remain valid for five years.

Prospective students will not be exempted from taking the 21+ entrance examination on the basis of any 21+ entrance examinations or intellectual abilities tests administered elsewhere.

7. The Executive Board has declared that 'old' HAVO and VWO diplomas with subject combinations chosen by the pupil are at least equivalent to the 'new' diplomas with subject cluster requirements. Consequently, prospective students holding these types of diploma may be admitted. Prospective students must, however, meet any requirements regarding previous qualifications (paragraph 4) and any further additional requirements (paragraph 5). (Section 7.28 of the WHW.)  
The institute director has declared that the 'old' HAVO and VWO diplomas with old profiles are equivalent to 'new' diplomas with profile requirements. Consequently, prospective students holding these types of diploma may be admitted. Prospective students must, however, meet any requirements regarding previous qualifications (paragraph 4) and any further additional requirements (paragraph 5). (Section 7.28 of the WHW.)
8. Where a prospective student applies for admission to a study programme based on a diploma other than one of the diplomas referred to above, the institute director will decide whether that diploma is equivalent and if it grants access to the study programme. Prospective students must, however, meet any requirements regarding previous qualifications (paragraph 4) and any further additional requirements (paragraph 5). (Section 7.28 of the WHW.)
9. Prospective students who are admitted by virtue of a diploma as referred to in paragraphs 2, 7 or 8 of this article will be subject to an additional assessment to determine whether they meet the knowledge and skills requirements as referred to in paragraph 4 and 5 of this article. (Section 7.28 of the WHW.)  
Prospective students must meet the requirements of this assessment prior to enrolment.

#### Article 2a Study choice check and study choice advice

1. The study choice check consists of at least the completion of a digital questionnaire and a contact moment with the study programme. Prospective international students as referred to in the Study Choice Advice Rules will be offered a contact moment (video call or by request face-to-face). Furthermore international student can participate in a webinar.
2. Within 4 weeks following registration, the prospective student will receive a link to the digital questionnaire. Within 4 weeks following completion of the questionnaire, the prospective student will receive an invitation to the contact moment with the study programme.  
International prospective students as referred to in the Study Choice Check Rules will receive further information on the study choice check within 4 weeks following registration.
3. The digital questionnaire can be completed in the period between January and September.

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<sup>1</sup> IELTS	6.0
TOEFL Paper	550
TOEFL Internet	80
TOEIC	670

(Indien zowel het onderdeel 'Speaking and writing' als 'Listening and Reading' is behaald.)  
Cambridge ESOL FCE-C (scale 169 – 172), FCE-B (scale 173-175)

4. The contact moments with the study programmes are planned in the period between January and September.
5. The contact moment will consist of a 30-minute interview, preferably conducted in person. Students resident abroad with a travel distance of more than 75 km will be invited for a telephone or video-interview.
6. The study choice advice will be sent to the prospective student by e-mail within ten working days of the contact moment.
7. The study choice advice is non-binding for prospective students who apply by no later than 1 May. Prospective students who apply after 1 May will not be permitted to enrol, except in the case of a situation as referred to in Article 2(2) or in the event of exceptional circumstances as set out in Article 3(3), under a through d of the Study Choice Check Rules.
8. The Study Choice Check Rules determine the categories of prospective students for whom the study choice advice is not obligatory. The study choice advice is likewise not binding for those groups of prospective students.

### **Article 3 Requirements regarding foreign diplomas/prospective international students**

1. Holders of a foreign diploma may not sit tests in the foundation year of a Dutch-taught study programme before having demonstrated to the Examination Board to have an adequate command of the Dutch language. (Section 7.28 of the WHW.)  
Command of the Dutch language must be at Nt2, programme II, level.  
The certificates for Dutch as a foreign language, Higher Education Language Proficiency Subject Cluster and Academic Language Proficiency Subject Cluster (CNaVT- PTHO and PAT) can be viewed as equivalents, as can the certificates for Dutch as a foreign language, Educational start-skilled and Educational Professional (STRT and EDUP).
2. The institute director may also decide that a prospective student with a foreign diploma may be admitted after the prospective student has demonstrated that he has an adequate command of the Dutch language. (Section 7.28 of the WHW.)  
Command of the Dutch language must be at Nt2, programme II, level. The certificates for Dutch as a foreign language, Higher Education Language Proficiency Subject Cluster and Academic Language Proficiency Subject Cluster (CNaVT- PTHO and PAT) can be viewed as equivalents, as can the certificates for Dutch as a foreign language, Educational start-skilled and Educational Professional (STRT and EDUP).
3. Prospective students with a foreign diploma seeking admittance by virtue of an entrance examination as referred to in Article 2, paragraph 6, must be at least 21 years of age.
4. Foreign prospective students from outside the EU who are 18 years of age or older on the date of their first enrolment must have a valid residence permit. (Section 7.32 of the WHW.)
5. Foreign students with a residence permit are required to earn at least 50% of the available credits each year. The IND will be informed if the student fails to meet this requirement, unless there are special circumstances due to which the student was unable to meet this requirement. Such a notification based on the same special circumstances may be withheld once during the course of each study programme.
6. For international<sup>2</sup> students, the following language requirement applies for admission to an English-language programme.  
- an average IELTS score of 6.0, for which the student must have a score of 6.0 for at least three components and may have a score below 6.0 for no more than one of the four components, provided this score is at least a 5.5.

A previously completed language test, with the exception of Cambridge, may be no more than two years old at the time the study commences, which can be either on 1 September or on 1 February. Exemption may be granted for this requirement if the international student can submit a diploma from prior education that was obtained in a country in which English is the official language of instruction. If the diploma was granted more than two years ago, the student will be asked to demonstrate their language skills again, unless English is the only language of instruction in the country where the student obtained the diploma.

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<sup>2</sup> According to the Code of Conduct International Student, the term 'international student' refers to a 'student with a foreign nationality who, in case of a third-country national on the basis of a residence permit granted to this effect, desires to continue, continues or has continued his/her full time education at a higher education institution in the Netherlands'.

Test	Overall Score	Component	No more than 1 deviating component
<b>IELTS</b>	≥ 6,0		
• IELTS reading		≥ 6,0	≥ 5,5
• IELTS listening		≥ 6,0	≥ 5,5
• IELTS speaking		≥ 6,0	≥ 5,5
• IELTS writing		≥ 6,0	≥ 5,5
<b>Cambridge</b>	≥ 169		
• Cambridge reading		≥ 169	160 t/m 168
• Cambridge listening		≥ 169	160 t/m 168
• Cambridge speaking		≥ 169	160 t/m 168
• Cambridge writing		≥ 169	160 t/m 168
<b>TOEFL</b>	≥ 72		
• TOEFL reading		≥ 18	
• TOEFL listening		≥ 17	
• TOEFL speaking		≥ 20	
• TOEFL writing		≥ 17	
<b>TOEIC speaking and writing</b>	≥ 310		
• TOEIC speaking		≥ 160	-
• TOEIC writing		≥ 150	-
<b>TOEIC reading and listening</b>	≥ 785		
• TOEIC reading		≥ 385	-
• TOEIC listening		≥ 400	-

Please note: the TOEFL and TOEIC programmes do not have a deviating component, as the lower limit applied in the 'Test Component' table is already the B2 lower limit as well.

- Various bachelor programmes at FHTenL are taught in a variant in which German is the working language for the foundation course phase. Students who opt for this variant must either have a school

diploma from a German school or have passed one of the following certificates:

- TestDaf at level 4 (TestDaf = Test Deutsch als Fremdsprache)
- DSH at level 2 (DSH = Deutsche Sprachprüfung für den Hochschulzugang)
- ZOP (Zentrale Oberstufenprüfung (this test has no longer been administered since the beginning of 2012))

#### Article 4 Professional activity requirements

The professional practice environment is not subject to any requirements.

### Section 3 Intake interview, exemptions, short track and tailored study programmes

#### Article 5 Intake interview

- Students entering a study programme may be offered an intake interview if they have competencies previously acquired elsewhere. Students can include the evidence of the competencies previously acquired elsewhere in their portfolios which are to be evaluated in an assessment or may use this evidence to substantiate a request for exemption before the Examination Board.
- Students who re-enrol after an interruption in a study programme in which they were previously enrolled will be required to take an intake interview to determine which part of the study programme still has to be completed. No intake interview is needed if agreements regarding re-enrolment in the study programme were already made with the Executive Board at the time that the student interrupted his study. If a student enters a study programme during the foundation year, agreements will be made on the period of time the student will be granted before the advice regarding the continuation of studies will be issued.
- A study programme will be drawn up based on the assessment of the competencies previously acquired and will be submitted to the Examination Board for approval.

#### Article 6 Exemptions

- The institute director can exempt a student from the foundation year examination if the student holds a diploma, Dutch or foreign, which is at least equivalent. (Section 7.30 of the WHW.) (In the case of students who hold a foreign diploma, also see Article 3.)
- Students who believe they are eligible for an exemption must submit an application to that end to the Examination Board. The Examination Board may grant an exemption from one or more interim examinations on the grounds of a review of an assessment or the holding of a diploma, certificate, accreditation of prior learning or similar document, such as proof of results achieved in a study programme taken at a research university or university of applied sciences and/or proof of administrative activities, with which students can show that they have already met the requirements

of the test in question. Exemptions are recorded in the study progress system. The period of validity of the exemption is stated in the exemption decision.

3. The Examination Board can grant an exemption from a minor based on the certificate of an accredited Associate degree, Bachelor's or Master's programme or on a document proving that the student completed a minor in an accredited Associate degree, Bachelor's or Master's programme, so long as this minor does not overlap substantially with the student's current Bachelor's programme. Exemptions based on study results from an accredited Associate degree, Bachelor's or Master's programme can only be granted if the student has documented proof of obtaining at least 30 credits in this study programme (for a Bachelor's programme, this requirement refers to the second and third year, or second year if it concerns an Associate Degree programme) and if these results do not overlap substantially with the student's current Bachelor's programme.  
A student who has taken part in the Fontys Empower programme and has successfully completed all components of that programme may, on that basis, may be granted an exemption for a minor provided the student submits a request to that effect and this possibility has been set out in Article 16(5).
4. The institute's exemption policy can be found on the [portal](#) of the institute.

#### **Article 7 Short-track/tailored study programmes**

1. Students who believe they are able to proceed with and/or complete their study programmes at an accelerated pace may submit an application requesting such to the Examination Board. The student coach's advice must be enclosed with the application. The organisation of the study programme must be able to accommodate the short-track option.

### **Section 4 Facilities with reference to student coaching, language, functional disability, administrative activities, Elite athletes scheme, student entrepreneurship**

#### **Article 8 Student coaching**

1. Every student is coached by a student coach.
2. In consultation with the student coach, the student decides how best to develop and how to shape the learning process.
3. The student consults with the student coach on the progress of the learning process.
4. The student coach conducts support and orientation interviews with the student in the foundation year. Reports of these interviews are drawn up by the student. The student files these reports and ensures that their student coach receives a copy of the reports. copies of which are given to the student. The student must sign these reports to indicate his agreement or, if applicable, with the note 'reviewed and not approved.'
5. Students may submit a request to the programme manager, who is therefore mandated by the institute director to be assigned a different student coach if they can give arguments for this.

#### **Article 9 Facilities with reference for language**

1. Students enrolled in their foundation year whose mother tongue is not Dutch can apply to the Examination Board to be allowed extra time when they sit tests in the first year of the foundation phase. Extra time to sit tests will only be granted to students who can prove that they use facilities to improve their command of the Dutch language.
2. For Dutch students, extra support will be arranged with regard to promoting Dutch language proficiency for those students who are in need of such support.  
The following facilities will be provided: all students receive individual coaching in Dutch language proficiency. In the case that a minimum of 15 students in the FHTenL-institute have provable deficiencies, FHTenL facilitates supporting classes in Dutch language.
3. For Dutch students who are enrolled in an English language programme, the following facilities are offered: all students receive individual coaching in Dutch language proficiency. In the case that a minimum of 15 students in the FHTenL-institute have provable deficiencies, FHTenL facilitates supporting classes in Dutch language.

#### **Article 10 Special facilities for students with a functional disability**

1. Students with a functional disability are legally entitled to effective adjustments, unless such adjustments would burden the institution disproportionately. (Section 7.13 of the WHW, Section 2a of the Equal Treatment of Disabled and Chronically Ill People Act.) See also <https://fontys.nl/fontyshelpt/Studentenbegeleiding/Bijzondere-omstandigheden.htm>
2. These adjusted facilities must be aimed at the removal or restriction of any obstacles and encourage the independence and full participation of the student as much as possible. The adjusted

facilities may relate to the study programme (including internships), the timetables, and type of study programme, the tests and educational tools.

3. A student who seeks to have adjusted facilities must submit a written and substantiated application in good time to the Examination Board. If necessary, the Examination Board will seek an expert's advice (such as a student counsellor) before taking a decision. If the Examination Board deems it necessary before taking a decision, it may confidentially inspect the medical certificate that may be available with the student counsellor, unless the student objects.  
The Examination Board must decide within four working weeks after receipt of the application, unless it requires further inquiry, in which case the student will be informed as to when more clarity can be given with respect to his application.
4. In the case of a protracted or chronic disability, such an application will only have to be made once for the entire study programme; in all other cases once per testing period or academic year. In its decision to grant the facilities, the Examination Board may also rule that these will apply for the entire duration of the student's study or that the student is to consult with his student coach annually to discuss whether the facilities are still adequate.
5. At the beginning of the academic year the institute will inform students regarding the possibilities for special facilities. Students will be informed of their right to consult a student counsellor.

#### **Article 11 Students with board memberships**

1. Students can include any board memberships as part of their portfolios. In order to do so, they must describe, in consultation with their student coach, how the board membership can contribute to the acquisition of one or more competencies of their study programme.
2. Board memberships for the DPC, IPC, CPC, or for study associations, student associations and as members of committees at Fontys can be listed on the diploma supplement. The student must request the listing at least two weeks prior to the graduation ceremony via the study programme administration, via [fhtenl-bedrijfsbureau@fontys.nl](mailto:fhtenl-bedrijfsbureau@fontys.nl).  
At the request of the student's study programme, the Centre for Administrative Activities (CAA) can confirm that the student has been an active board member of a CPC. In the case of board memberships of a PC or IPC, the study programme can request confirmation from the relevant IPC or PC.
3. Students who believe that their board memberships demonstrate that they have the knowledge, understanding and/or skills etc. that are assessed in particular tests may apply for an exemption from such tests from the Examination Board.
4. Facilitation for board memberships is laid down in the [Fontys Regulations on the Participation councils and degree programme committees, the Regulations on board membership grants and the Remuneration scheme for committees and steering groups](#).

#### **Article 12 Elite Athletes scheme - Student entrepreneurship**

1. Students who have been granted an Elite Athletes or Talent status are entitled to facilities from the [Elite Athletes Scheme](#). Facilities regarding the adjustment of tests or test timetables, an adjusted arrangement regarding compulsory attendance, working in groups and an adjusted internship must be sought from ...  
Advice regarding the continuation of studies may be deferred for students with an Elite Athlete status (see Article 32).
2. Students who are eligible for the [Student Entrepreneurship Scheme](#) may apply to the Examination Board, among others, for facilities regarding the adjustment of tests or test timetables, an adjusted arrangement regarding compulsory attendance for education components, working in groups and an adjusted internship. These facilities should be sought from the examination board, [fhtenl-excie@fontys.nl](mailto:fhtenl-excie@fontys.nl). Advice regarding the continuation of studies may be deferred for students with entrepreneur status (see Article 32).

### **Section 5 Study programme content**

#### **Article 13 Study programme profile – main subjects/differentiations – occupational requirements**

1. The study programme is based on a study programme profile. The exit qualifications of the study programme are described in the study programme profile. These can be found via the following link: [Programme-specific annexes](#).
2. The study programme has the following main subjects:
  - Information Technology has the main subjects Software Engineering and Business Informatics.
  - Logistics Management has the main subject Food and Flower Management. Students may follow this main subject at the FIBS institute.

- Starting September 2020 Industrial Design Engineering has the main subjects Industrieel Product Ontwerpen and Industrial Design Engineering.
- 3. The principle of the study programme is mentioned in the [Register of Study Programmes](#).
- 4. The study programme does not impose any specific occupational requirements.

#### Article 14 Study programme layout

1. Each Bachelor's programme has a foundation year phase with a study load of 60 credits, which is concluded with the foundation year examination. The function of the foundation year is to orientate the student, allowing him or her to make suitable choices.
2. A Bachelor's programme has a study load of 240 credits with a nominal study load of 60 credits per academic year and consists of a major and a minor. The major has a study load of 210 credits. The minor has a study load of 30 credits.

#### Article 15 Overview of units of study and credits

1. Every study programme consists of a coherent set of units of study, which are components of a study programme concluded with an interim examination. Units of study cannot exceed 30 credits.
2. Only whole credits are awarded for units of study. Via the following link the distribution of credits can be found: [Programme-specific annexes](#).
3. Study programmes and tests conducted in a foreign language are subject to the Code of Conduct for Study Programmes taught in a Foreign Language; the overview of units of study in states which teaching and testing is provided in a foreign language.

#### Article 16 Content of minors and other special programmes

1. Students are not restricted in their choice of a minor, whether the minor is a minor specific to a study programme or one offered across Fontys, or an external minor, provided there is no overlap with the major programme (see also paragraph 2).  
The study programme offers the following minors.

Offering school	Programme/Minor	IPO	IDE	WTB	MEC	ICT	LM	LE
FHTenL	Smart Innovation (SI)	+	+	+	+	+	+	+
	Design for Engineers (DFE)	+	+	+	+	+	+	+
	HBO Top Minor	+	+	+	+			
	Composite minor	+	+	+	+	+	+	+

+ = students of the study programme in question may select the relevant minor.

The institute also offers the following fontys-wide minors:

Offering school	Programme/Minor	IPO	IDE	WTB	MEC	ICT	LM	LE
FHTenL	E-preneurship (EPREN)	+	+	+	+	+	+	+
	High Tech Agro Systems (HTAS)	+	+	+	+			
	Customs Management in International Business (CUMIB)	+	+	+	+	+	+	+

+ = students of the study programme in question may select the relevant minor.

The following study programme minors from other Fontys programmes are accessible for students from the following FHTenL study programmes:

offering school	Programme/Minor	IPO	IDE	WTB	MEC	ICT	LM	LE
FH BEnT	Trainer and Coach in Technology*	+	+	+	+	+	+	+
FPH	Centre of Expertise Health and Technology*	+	+	+	+	+	+	+
FIBS	International Management	+	+	+	+	+	+	+
FIBS	EBM – European Business Management	+	+	+	+	+	+	+



FIBS	<a href="#">Embrace the Border</a>	+	+	+	+	+	+	+
FH ICT	Study programme minor*					+	+	+
FH ENG	Study programme minor*	+	+	+	+			
FH TNW	Study programme minor*	+	+	+	+			

+ = students of the study programme in question may select the relevant minor.

\* = agreed upon between affected directors; more information about the minor can be requested from the school

- Students who want to take a minor abroad or an external minor must seek the Examination Board's permission regarding their personal choices with respect to the minor prior to its start. Participation in a minor requires students to have passed the foundation year examination, unless the Examination Board grants them permission to take the minor without fulfilling this requirement. The minor must be taken in the third year of study.
- Enrolment in a minor must be done before the start date as stated on the [Fontys minor portal](#) or in the minor regulations.
- High-achieving students can take a minor on top of the regular study programme of 240 credits. This is subject to the following conditions:
  - The student submits a request to examination board in which he adequately motivates:
  - why he wishes to follow two minors;
  - which second minor he wishes to follow
  - The student studies in the nominal time
  - The student is eligible for the distinction cum laude in the main study phase.
 A minor that has been passed will be mentioned on the diploma supplement
- The Fontys Empower reorientation programme is open to students who have hit a roadblock in their studies. The programme has a study load of 30 ECTS credits. The regulations for this reorientation programme can be found on the [Pulsed](#) portal .  
A student who has taken part in the Fontys Empower programme and has successfully completed all components of that programme may, on that basis, be granted an exemption for a minor, provided the student requests an exemption from the Examination Board of the programme in which they are enrolled, unless that programme does not offer a minor.

#### Article 17 Education components - learning environment

- Via the following link, an overview of the education components that are part of the study programme is offered: [Programme-specific annexes](#).
- The education components of the minors are described in the minor regulations. The regulations governing the minors offered across Fontys can be found at [www.fontys.nl/minors](http://www.fontys.nl/minors). The regulations governing minors specific to study programmes are included as an appendix to this TER.
- Any entry requirements a student must meet before participating in an education component are stated in the overview as referred to in paragraph 1.
- Participation in education components in the post-foundation year phase is allowed after passing the foundation year examination. The Examination Board may grant permission to a student who has not passed the foundation year examination to participate in education components in the post-foundation year phase. (*Section 7.30 of the WHW.*)
- Enrolment in the education components is not required, except for internship and graduation. Registration for the internship and the graduation project is outlined in the Internship/Graduation Regulations, together with the entrance requirements for internship and graduation. See the specific regulations on the institute's [portal](#).
- The timetable is announced on the [institute's portal](#) no later than 3 weeks prior to the start of classes.
- Students who have registered for an education component must ensure that they meet the entry requirements of that component. The overview in Article 17, paragraph 1, indicates the education components to which requirements apply for participation as well as the nature of these requirements. If the requirements concern compulsory attendance, students who are eligible for the Elite athletes scheme or the [Student entrepreneur scheme](#) can apply to meet this requirement in a parallel group or for exemption from this obligation (see also Article 12).

#### Article 18 - Evaluation of teaching

The teaching provided during the study programme is evaluated in the following way: Each study programme has its own evaluation calendar, in which is stated when and how the teaching will be evaluated. The calendar can be consulted via the portal of the quality committee. It is the result of our quality policy, which can also be found on that [portal](#).



## Section 6 Tests, *evidence*, assessment and study progress

### Article 19 Types of tests - evidence

1. A test may consist of:  
One or more mandatory tests or mandatory partial tests and/or freely-chosen evidence evaluated as an assessment, such as a portfolio.
2. Tests are conducted in writing or orally or in a fashion that combines both writing and oral delivery (e.g. product and presentation/interview).
3. An oral examination, including an assessment, is conducted by at least two examiners. A report must always be drawn up of an oral test on a specially designed evaluation form an assessment of the quality of the evaluation afterwards afterwards. A test may be conducted by a single examiner only following the approval of the Examination Board and provided the student does not object. An oral test is held in public. Interested parties who wish to attend an oral test must submit a request to that effect to the examiner(s) at least two weeks before the test is held. The examiner must inform the student who is taking the test. If the student objects, the request to attend the oral test will in any event be rejected. Any rejection by the examiner will be substantiated. When the Examination Board offers students the possibility to sit an additional oral test by way of replacement of a regular test, it will always be conducted and assessed by two examiners.
4. If a test consists of an assessment of freely-chosen evidence, the programme should allow the student to collect such evidence and receive feedback from the examiners, external experts and/or peers. The requirements that the evidence must meet are given in the study guide/module descriptions.

### Article 20 Tests and assessments

1. The Examination Board will designate one or more examiners for each test. An examiner can also be an external expert.
2. The assessment of minors is described in the minor regulations. The examiner of the minor determines whether a student has passed the tests. The Examination Board of the coordinating institute that offers the minor must determine whether the student has passed the minor and ensure that the student receives a certificate. The result achieved for the minor is forwarded to the programme administration of the study programme in which the student concerned is enrolled.
3. Preceding the first summative assessment of each study year, the student hands in a signed authenticity statement. In addition the student takes care of a signed authenticity statement prior to handing in the internship and graduation report. The procedure and statement (format) can be found on the [portal of the examination board](#).

### Article 21 Content of tests, duration of the test, test aids and test timetables

1. The content of the test, including the learning objectives, is described in the module manuals/theme books of the relevant units of study and this information is made available to students at least 3 weeks before the test. After publication, the test information will not be changed significantly before the test.
2. The examiner determines the period of time allowed to students to take the test as well as any aids that students may use during the test, subject to the guidelines and instructions provided by the Examination Board. This information must be stated on the examination paper, and/or in the relevant guidelines. The institute's surveillance guidelines can be found on the [portal](#).
3. The test timetable, also including the resit timetable, for a particular teaching period must be announced via the [portal of the study programme](#), at least 3 weeks before the start of that test period. The test timetable also contains dates and resit dates for the handing in of assignments, in the case these assignments are used as a summative test.

### Article 22 Registration for tests

Registration for tests is not required.

### Article 23 Proof of identity during tests

Students must prove their identity at every test by showing a legally valid form of ID other than a student ID card.

### Article 24 Test marking system

1. The assignments, questions, assessment norms and criteria are determined by the examiners with due regard for the guidelines and instructions provided by the Examination Board. The examiner

conducts the test and determines the result on the basis of the determined assessment standards and assessment criteria.

2. If one and the same test is conducted and assessed by more than one examiner, the Examination Board will ensure that the examiners adhere to the same standards and criteria.

#### Article 25 Test results

1. The test results must be announced in writing to the student within ten days of the date of the test apart from the exceptions laid down in the Teaching and Examination Regulations. Test results of papers/project, reports or portfolio's must be announced within 15 workdays. The study programme administration is responsible for announcing the test results. The privacy of students will be respected when test results are announced.
2. Students are entitled to inspect all assessed tests and the accompanying assessment criteria and to be given feedback on the results.
3. Inspection is subject to the procedure described below.  
Inspection of written tests will take place within 5 working days (ideal) following announcement of the test results, but at least 3 working days before the relevant resit. Daarbij geldt dat tussen inzage en herkansing minimaal drie werkdagen zitten. In addition, there is a minimum of three working days between inspection and resit.
4. The feedback procedure can be found in the module manuals/ theme books of the specific teaching unit.
5. At least once a year, the student can request a written overview of the results obtained by sending an email to the education administration ([fhtentl-bedrijfsbureau@fontys.nl](mailto:fhtentl-bedrijfsbureau@fontys.nl)), from which rights can be derived.

#### Article 26 Inability to sit tests

1. Students who have acted in accordance with the registration procedure described in Article 22 but who are unable to sit the test for reasons beyond their control, the legitimacy of which reasons is subject to assessment by the Examination Board, may apply to the Examination Board to sit the test within a period of time to be set by the Board.
2. The application referred to in the previous paragraph must be submitted in writing to the chairman of the Examination Board and include the necessary evidence (see Article 38(3)). The Examination Board will then take a decision and inform the student concerned. If the request is granted, the Examination Board will set a date, time and place for the test. Any rejection of the request will be substantiated and the student will be informed of his right to appeal. In assessing the request, the Examination Board's primary criteria are the obstruction of the study progress and the student's personal circumstances.
3. If such a request relates to a test of a minor offered across Fontys, the student must direct the request to the coordinating institute responsible for the minor, as described in regulations governing the minor

#### Article 27 Request for a review

1. Students who do not agree with an assessment can submit a request for a review of the assessment to the Examination Board within 4 working weeks after the date of the assessment (see Article 38(3) of these Teaching and Examination Regulations and Article 44 of the Students' Charter). The Examination Board must take a decision within 4 working weeks at a maximum.
2. Students may also appeal directly to the Examination Appeals Board within 6 calendar weeks after the date of the assessment via [www.fontys.nl/studentenloket](http://www.fontys.nl/studentenloket). (see Article 45 and Article 46 of the Students' Charter).

#### Article 28 Resits

1. A test is offered at least twice per academic year. If the student did not participate in the first test moment, whether or not as a result of force majeure, the student will first use the second test option. A component for which a sufficient result has been obtained may be retaken once. In that case, the highest result applies, as can be verified in the progress registration system.  
For the practice-related tests below, the resit can only take place in the following academic year:

In the next semester	Internship
	Graduation
In the next study year	Projects, unless stated otherwise in the module manuals

2. At least two opportunities to take tests that assess the material they have learned will be offered. Following these two test opportunities, the material to be studied for the test may be adapted to the

material offered in the teaching block prior to the test. An up-to-date description of the material to be tested can be found via the module manuals.

3. If a test consists of an assessment of freely-chosen evidence, then the programme should offer the student the following option of improving or supplementing the evidence. The following applies to the IDE programme: students can improve and supplement the evidence and request a resit until the interim feedback sessions of the following semester.

#### **Article 29 Period of validity of results - evidence**

1. The period of validity of successfully completed component tests is ten years.  
The validity period for evidence is ten years.  
Results achieved for interim examinations can only lapse if the understanding/knowledge/skills to which these interim examinations relate can be shown to be obsolete. Understanding, knowledge and skills that were assessed more than 10 years ago can evidently be shown to be obsolete.  
The period of validity of successfully completed interim examinations is: 10 years  
The Examination Board may extend this term.
2. In the event of special circumstances as referred to in the Profiling Fund Scheme, the period of validity of interim examinations will as a minimum be extended by the duration of the support granted on the basis of that scheme.
3. If the study programme has been substantially altered, details on how this term will be restricted can be stated below, whether in the form of a written decision issued to a student or incorporation in the Teaching and Examination Regulations, if it applies to the entire cohort.

#### **Article 30 Graduation product - Knowledge bank**

If the study programme provides for the submission of a graduation product that can be included in a knowledge bank, students must submit the product digitally, as one document, to enable its inclusion in one or more digital knowledge bank(s). On submission of the product, students must also attach the signed 'Permission form for the filing and making available of a graduation product in a digital knowledge bank'. With this form, students give their permission for the graduation product to be entered in the knowledge bank and for it to be made available to potential users at the university of applied sciences and elsewhere. On submission of the digital graduation product, the student and/or client and/or organisation offering the internship may indicate their objection to the graduation product being entered in the databank.

#### **Article 31 Study progress**

The study programme is responsible for recording the test results in the programme administration.

#### **Article 32 Advice regarding the continuation of studies**

1. During the first year of enrolment in the foundation phase of a bachelor study programme and, where possible, prior to the start of the second semester, the student is given advice on his study progress. If the study progress is unsatisfactory, the student will receive a written warning and be told that if the study progress continues to be unsatisfactory, he will receive a negative advice regarding the continuation of his studies. A reasonable period within which the student must have improved his grade point average and the opportunities a study programme offers in that regard are stated in the warning. (Section 7.8b of the Act.)  
A student who has not received a warning at that stage may yet receive one at a later point in the first year if he has fallen behind, and will be given a period within which to improve his grade point average.  
The student will be given a warning in the following cases:
  - the number of credits achieved is < 22In calculating the number of course credits in the framework of the initial study advice, for the study programmes ICT, MEC, WTB and IPO, the following are counted:
  - already completed teaching units or the credits already awarded as a result;
  - all teaching activities scored with at least a grade 5.5 or the equivalent calculated credits (in the module manuals and in the study progress system, an indication is given of how for each teaching unit the credits are compiled proportionally to the weighting of the teaching activities).
2. The study programme must give students advice regarding the continuation of studies in writing before the end of their first year of enrolment (12 months) in the foundation phase. Advice may be related not only to the continuation of the study programme, but also to the main subject the student may take. Advice regarding the continuation of studies can be negative (binding negative study advice), meaning that the student's enrolment in that particular study programme will be terminated and that he will not be allowed to re-enrol in the same study programme.

Advice regarding the continuation of studies will be given to a student taking a part-time study programme with a study load of fewer than 60 credits in the first year of enrolment.

The study programmes below have a common foundation year:

The study programmes below have a common foundation year:

- Logistics Management
- Logistics Engineering.

Advice regarding the continuation of studies given for a common foundation year applies to the study programmes sharing a common foundation year. Students that receive a binding negative study advice given in a study programme with a common foundation year, are –as a consequence- also not allowed to register for the other study programme sharing the common foundation year.

3. Advice regarding the continuation of studies is based on the student's results in the foundation year. The Examination Board advises the institute director on advice regarding the continuation of studies to be given. This advice must take into account the student's personal circumstances. Students must report any personal circumstances to their student coach or student counsellor the moment they occur.

If the student misses the deadline for reporting special circumstances, the Examination Board will examine whether it was excusable for the student to miss the deadline for reporting those circumstances.

Engaging in top-class sports activities by students who have been granted a Top-Class Sport or Talent status are entitled to be regarded as a special circumstance, on the basis of which the delivery of advice regarding the continuation of studies can or will be deferred. A minimum number of credits these students must earn in order to be eligible for such postponement has been established.

The practice of running a business of his own by student entrepreneurs who have been awarded student entrepreneur status, as defined in the Fontys Student entrepreneur scheme, is also regarded as a special circumstance, on the basis of which the delivery of advice regarding the continuation of studies is deferred. However, a minimum number of credits which must be achieved to qualify for that deferral may be specified for student entrepreneurs (see also paragraph 4 of this article).

4. The student will receive a positive study advice if the student has obtained 60 EC. A student who has obtained between 30 EC and 60 EC, will receive a 'positive advice'. Both positive recommendations give the student access to the second year of study.

Norm	Advice	Consequence
<30EC	Negative	Student does not have access to academic year 2. In consultation with and on the advice of the student coach, the student makes a decision regarding the progress of the study: <ul style="list-style-type: none"> <li>• Student resumes education in year 1 (achieved results are retained)</li> <li>• Student decides not to continue studies</li> </ul>
30EC ≤ ... < 60EC	Positive under conditions	Student has access to academic year 2. A studyable program is agreed upon in consultation with the student's student coach and taking into account entry requirements for education & testing (see programme-specific appendices).
60EC	Positive	Student has access to academic year 2. Student coach and student conduct counseling discussion about further progress.

Students who have been granted a Top-Class Sport or Talent status as referred to in Article 32(3) must have earned at least 23EC in order to be eligible for postponement of their study advice.

The minimum number of credits which that must be achieved to qualify for that deferral for student entrepreneurs is 30EC.

5. Where there are special circumstances as defined in paragraph 3 of this article which may have had an influence on the credits the student obtained, the delivery of advice regarding the continuation of studies may be deferred until the end of the second year of enrolment or until the end of a shorter period. At the end of the second year or the shorter period, there will be a further review of whether the student has met the criteria for a positive study advice as defined in paragraph 4.
6. Students who seek the termination of their enrolment during the first year of enrolment will be given a warning from the director stating his expectation that they may not be suitable for the study programme. The director must seek the advice from the Examination Board before doing so. The number of months of enrolment students have left before being given advice regarding the continuation of studies must also be determined in the event the student should decide to enrol in the same study programme at a later date (see also Article 35).

### Article 33 Additional provisions concerning binding negative advice regarding the continuation of studies

Does not apply.

## Section 7 Graduation

### Article 34 Examinations - certificates - diploma supplement

1. Students have passed the examination of the foundation year or the study programme if they have passed all units of study which form part of the foundation year or the study programme, as referred to in Article 15. (*Section 7.10 of the Act.*)
2. Certificates are given at the following occasions:
  - on passing the foundation year examination;
  - on passing the study programme's final examination.
3. The certificate will only be given after it has been established that the student is enrolled and has paid his tuition fees for all the enrolment years. (*Section 7.11 of the WHW.*)
4. After successful completion of the examination, the Examination Board awards the certificate. The certificate is dated on the date of the student's final academic activity (test or assessment). The certificate of a study programme comes with a diploma supplement. This diploma supplement may include mention of a student's board activities (see Article 11). Students who have served as members of the Examination Appeals Board may also request that activity to be included on their diploma supplement.  
The Examination Board will determine whether a student has passed within a maximum of eight calendar weeks after the student's final academic activity (test or assessment).  
If the student wishes for the certificate to be dated later, the student must postpone the completion of his final academic activity (test or assessment).
5. The certificate is signed on behalf of the Examination Board by the (deputy) chairman, the (deputy) secretary, the candidate and, if applicable, an external expert. (*Section 7.11 of the WHW.*) On behalf of the institute, the Examination Board also confers on the student the degree if the student has taken the study programme examination.

For the study programmes' examination the following degrees are awarded:

Programme	Degree	Abbreviation
Mechatronics Industrial Design Engineering Mechanical Engineering Information Technology Logistics Engineering Logistics Management	Bachelor of Science	BSc

6. The award ceremony takes place at a time decided by the institute.  
Students who passed the study programme examination and have requested the postponement of the award of the certificate may be issued a statement that the study programme degree has been conferred on them. (*Section 7.11 of the WHW.*)
7. The certificates of students whose performance has been extraordinary will state the distinctions referred to below. The distinction 'cum laude' is the highest degree possible.  
The following applies to the IDE programme:  
The student will receive the distinction 'cum laude' on the propaedeutic certificate if the student is nominated by the study programme. The Examination Board assesses the nomination.

For other programmes:

Students will be awarded the distinction 'cum laude' if they meet the following criteria:

The student is awarded the distinction 'cum laude' on his foundation year certificate if he has complied with the following requirements:

- The student passed the foundation year in the nominal time (when following the standard programme within the first year of his study).
- The student may not have more than 20% exemption for the credits for the foundation year.
- The student has passed all examination units of the foundation year with a grade of at least 7.0 (not rounded off) and achieved a weighted average (on the basis of all credits) for all foundation year teaching units (final grades) of at least 8.0 (not rounded off).

The student will be awarded the distinction 'cum laude' on his bachelor certificate if he has met the following requirements:

- The student passed the study programme in the nominal time (when following the standard programme within four years, when following two study programmes simultaneously 4 and a half years).
- The student has completed the graduation and internship project both with at least a grade of 8.0 (not rounded off). For the internship, exemption is permitted.
- The minor was passed.
- The student may not have an exemption for more than 20% of the course credits from the main phase.

• With the exception of the minor (which is not considered), the student has passed all teaching units in the main phase with a grade of at least 7.0 (not rounded off) and (on the basis of the credits) a weighted average for his grades for the teaching unit of at least 8.0 (not rounded off). The final grade in a teaching unit is calculated as the weighted average of the grades for the tests in the teaching unit. Exemptions as well as results expressed in 'sufficient' are not counted in calculating the weighted average.

8. The Executive Board reports to DUO the students that have passed the final examination of the study programme.

#### **Article 35 Statement on departure**

1. Every student who seeks to terminate his enrolment without having passed the study programme's final examination will be invited for an interview.
2. At the student's request, the student may be issued a statement listing any results achieved.
3. The statement must specify that the interim examination test results will in principle be valid for ten years. The statement can include a reservation in the event of a substantial overhaul of the study programme. (See Article 29.)

#### **Article 36 Transfer**

No specific arrangements are made with universities with respect to the Bachelor's programme in order to facilitate the smooth transfer of students to a university Master's programme.

### **Section 8 Irregularities and fraud**

#### **Article 37 Irregularities and fraud**

1. If irregularities are discovered in connection with a test, as a result of which the Examination Board cannot guarantee the test's quality and any of its results, the Examination Board may forgo having the test checked, or declare a test result void. In such cases, the Examination Board must ensure that an opportunity to resit the test in the near future is offered to the affected students.
2. If a student is guilty of an irregularity committed with respect to (a component of) an examination or fraud, the Examination Board may exclude the student from sitting one or more tests of the study programme for a period to be determined by the Examination Board but which will not exceed one year. Any act that contravenes the regulations that have been established regarding testing and assessment shall be considered fraud in the sense of this article. If the test has already been assessed, the result will be declared void.
3. In the case of serious fraud, the Examination Board can propose to the Executive Board that the enrolment of the student involved be prematurely terminated (*Section 7.12b of the WHW.*)
4. If the irregularity or fraud is only discovered after the examination, the Examination Board may withhold or claim back the certificate of the study programme or decide that the certificate will not be issued unless the student sits a new test or examination in the components to be determined by the Examination Board and in a fashion to be determined by the Examination Board.
5. Before taking a decision, the Examination Board will hear the student and any other interested parties. A report will be drawn up of this hearing, of which a copy is forwarded to the student. The Examination Board must notify the student of its decision without delay, which notification can be given orally if required but must in any event also be issued in writing. Furthermore, the student is informed of his right of appeal.
6. The Examination Board makes up a report of its decision and the facts it is based on.

### **Section 9 Examination Board, appeal**

#### **Article 38 Examination Board**

1. The institute director establishes an Examination Board for each study programme or group of study programmes.
2. The Examination Board's duties and responsibilities are laid down in the WHW. (*Sections 7.12, 7.12b and 7.12c of the WHW*). These include the following duties and responsibilities:
  - responsibility for guaranteeing the quality of testing;
  - responsibility for guaranteeing the quality of the organisation of and the procedures surrounding tests and examinations;
  - to determine objectively and professionally whether a student has passed an examination;
  - to award certificates and the diploma supplement;
  - to determine alternative tracks;
  - to assess applications for exemptions and reviews and to award applications for special facilities;
  - to determine whether an examination has been conducted in a way other than that prescribed in the TER;

- approval of the details of a foreign minor or external minor;
  - to give advice to the institute director on advice regarding the continuation of studies to be issued;
- The composition of the Examination Board can be found in the Appendix 'Composition of the Examination Board'.

3. An application to the Examination Board can be submitted to [fhtenl-excie@fontys.nl](mailto:fhtenl-excie@fontys.nl). Guidelines for applications can be found on the [portal](#) (see also Article 26(2) and 27)

### **Article 39 Appeals**

Students who do not agree with a decision of the Examination Board can lodge an appeal against this decision within six calendar weeks after the date of the decision with the Examination Appeals Board via [www.studentenloket.nl](http://www.studentenloket.nl) (see Articles 45 and 46 of the [Students' Charter](#)). (Section 7.61 of the WHW.) Students can contact the Student Counselling Office (iStudent@fontys.nl) for help on lodging an appeal.

## **Section 10 Retention and hardship clause**

### **Article 40 Retention of documentation**

1. The Examination Board is responsible for retaining the minutes of its meetings and its decisions for a period of seven years.
2. The Examination Board is responsible for retaining its issued statements, among others, the statement on departure of a student who terminates his enrolment without having passed the study programme's final examination, for a period of ten years.
3. The Examination Board will ensure that the following information on each student will remain in the institute's archives for 50 years:
  - information on whether each student has obtained a foundation year certificate and/or a certificate of higher professional education including the list of marks.
4. The institute director is responsible for retaining test papers/assignments, assessment criteria, marking standardisation, pass marks, test matrices and test analyses for a period of seven years.
5. The institute director is responsible for retaining the lists drawn up and signed by the examiners containing the results achieved for a period of ten years.
6. The institute director is responsible for ensuring that all final papers and other kinds of tests in which students demonstrate their command of all aspects of the final attainment level, including assessments, will be kept for a period of seven years.
7. For the purpose of the external assessment of the programme in connection with accreditation, the institute director will ensure retention of a representative set of tests, including assessments, for a period of two years after the assessment.
8. The institute director is responsible for ensuring that the work completed by the student (written and non-written, including digital work) including assessments, with the exception of the work forming part of the representative set of final papers, is either destroyed or returned to the student after the expiry of a term of at least six months following the publication of the result. This term may be extended if necessary in connection with an appeal procedure.

### **Article 41 Hardship clause**

1. The Examination Board can make provisions for serious injustices that occur as a result of the application of these rules; it can also make decisions in cases not provided for by these rules. In order to decide whether the hardship clause must be applied, the Examination Board must weigh the interests of the student concerned and those of the study programme. Cases requiring immediate action may be heard by the chairperson of the Examination Board or his deputy after which the other members must be notified as soon as possible.
2. Students must apply in writing, stating reasons, to the Examination Board for the application of the hardship clause in accordance with Article 44 of the Students' Charter. The Examination Board decides on the student's application and communicates this decision in writing, stating reasons, to the student concerned, who is also informed of his right of appeal.

## **Section 11 Final provisions and implementation**

### **Article 42 Entry into force, amendments, publication and official title**

1. The TER applies to all students enrolled in the study programme in question during the 2022-2023 academic year, unless otherwise stated below.
2. The general section of these regulations and any amendments thereto will be established by the Executive Board, after having obtained the consent of the students' section of the Central

Participation Council. PC's will be given an opportunity to issue advice to the CPC. That general section of the TER constitutes the basis on which the study programme-specific TER for each study programme will be drawn up before being submitted to the Examination Board for their advice and the (joint) PC and IPC for their advice/consent. The (joint) PC advises the institute director and sends its advice to the IPC for informational purposes. The IPC advises the institute director and sends its advice to the (joint) PC. The establishment of and amendments to the study programme-specific TER are effected following a proposal from the institute and require the consent of the students' section of the competent IPC and the (joint) PC. (see *Sections 10.3c, 10.20 and 7.13 of the WHW.*)

3. The text of the TER can be amended if warranted by changes to the organisation or organisational components with due observance of the provisions of paragraph 4. In the event of an interim change, the procedure as described in paragraph 2 applies.
4. If the interests of an individual student are prejudiced as a result of interim amendments of the regulations, the student may submit a written application to the Examination Board to protest against the amendment of the rules. The Examination Board examines the student's application and bases its decision on a weighing-up of the interest of the individual student on the one hand and the interest of the quality of the study programme on the other.
5. The institute director adopts the study programme-specific TER before 1 June of the academic year preceding the academic year that starts on 1 September. He ensures the publication of the study programme-specific component of these regulations and any amendments thereto by making them available for inspection with the secretariat of the study programme and placing them on the website.
6. The official title of these rules is 'General Section of the Teaching and Examination Regulations of Fontys'. The official title of these rules is 'General Section of the Teaching and Examination Regulations of the Bachelors fulltime programmes of Fontys' School for Technology and Logistics'

#### **Article 43 Transitional provisions**

When a study programme is subject to a substantial overhaul, the following transitional provisions will apply. After the last regular activities of the 'old' programme and the related test or examination have been completed, this test or examination will be held two more times by way of resits. After that, it will be decided which test or examination that is part of the 'new' programme the student must sit to replace the 'old' one.

#### **Article 44 Unforeseen cases**

The Examination Board decides in all cases not provided for by the study programme-specific part of the TER, unless the issue is covered by the institute director's competency.



## **B - Set-up of the study programme and support facilities**

### **1. Set-up, organisation and execution of the study programmes**

Information on the set-up, organisation and execution of the study programmes can be found in:

- *the study programme's digital prospectus*
- the Teaching and Examination Regulations (see under A).
- 

### **2. Facilities for students**

Information on facilities for students can be found at:

- the institution-specific section of the Fontys Students' Charter ([www.fontys.edu/rules](http://www.fontys.edu/rules))
- the website of [Fontys](#), among others, [Fontys helps](#)
- the website of [Fontys Study Abroad](#)
- the information on the study programme's portal

### **3. Study support**

Information on study support can be found in:

- the Teaching and Examination Regulations (see under A)
- the information on the study programme's portal

## **C - Internal complaints procedure**

Students whose interests are directly affected by acts carried out by a staff member or a student against them, or who have a grievance regarding organisational matters, may lodge a complaint with the Executive Board, as described in Article 47 of the Students' Charter. The email address that students use for handing in a complaint is [studentloket-beroep-bezwaar-klacht@fontys.nl](mailto:studentloket-beroep-bezwaar-klacht@fontys.nl); which is also mentioned on the institute's portal.

## APPENDIX 1 Programme-specific annexes

Opleiding	Variant
MECHATRONICS	Fulltime
INFORMATION TECHNOLOGY	Fulltime
INDUSTRIAL DESIGN ENGINEERING (IPO)	Fulltime
INDUSTRIAL DESIGN ENGINEERING (IDE)	Fulltime
LOGISTICS MANAGEMENT LOGISTICS ENGINEERING	Fulltime
MECHANICAL ENGINEERING	Fulltime

KEUZEMODULES SEMESTER 7	Link
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Programme	MECHATRONICS
Variant	FULLTIME
Study year	2022-2023

## Contents

1. Exit qualifications (see OER Article 13)
2. Curriculum (see OER Articles 15 and 17)
3. Assessment

# 1. Exit qualifications

See *TER Article 12*

This section contains information about the set of qualifications for the study programme, and indicates how this set is linked to national and international standards.

## 1.1 Set of qualifications

The study programme's set of exit qualifications is based on the national degree programme profile, which contains eight engineering competences ('the BEng competences'). The study programme defines its profile by specifying the national competences for the Mechatronics field of application: by indicating the context, field and knowledge base; the profile is thus shaped by the translation of the competences into the curriculum. The set of exit qualifications is validated in the table below by linking it to national and international standards.

An 'x' means that all behavioural characteristics for the field competence concerned contribute to the implementation of the Dublin Descriptor. A letter (e.g. 'a') indicates that the specific behavioural characteristic for that field competence contributes to the implementation of the Dublin Descriptor. For an explanation of the letters, see pages 17–19 of the national Bachelor's profile.

Table 1. Study programme competences.

Qualification/competence	Validation against Dublin Descriptors				
	Knowledge and understanding	Applying knowledge and understanding	Making judgements	Communication	Lifelong learning skills
Connection with HBO standards	ST1, ST3	ST2, ST3	ST2, ST4	ST3	St2
Analysing	X	X	A, B	C, D	
Designing	X	X	A, E	F	
Implementing	X	A, B	C	D	
Controlling	X	X	C	D	
Managing	X	A	B	C, D, E	
Advising	X	D	C	A, B, D, E	
Researching	X	A	B	C, D, E	E
Professional development	X	X	A, B, C	D, F	X

## 1.2 Levels

Diversity in qualifications, and in the desired level of proficiency in the different phases of the study programme (the programme has a first-year phase, a core phase and an engineer phase), requires the details of each level to be specified. The programme is committed to the nationally-defined level descriptions (HBO Engineering, 2016). Each level is explained with reference to three factors. The levels (1, 2, 3) are set out below, together with a brief explanation. (Source: Bachelor of Engineering).

Table 2. Description of levels.

Factors	Intake level	Level 1	Level 2	Level 3
Nature of the task	HAVO 5 / MBO 4 exit level	Simple, structured, applies familiar methods directly in accordance with accepted standards	Complex, structured, applies familiar methods in changing situations	Complex, unstructured, improves methods and applies standards to the situation
Nature of the context		Familiar, simple, monodisciplinary, in a classroom setting	Familiar, complex, monodisciplinary, in a practical setting under supervision	Unfamiliar, complex, multidisciplinary, in a practical setting
Level of independence		Supervised	Supervision if required	Independent

For each year of study, the programme has determined the level at which students must demonstrate the competences (through their professional tasks). The programme is committed to the national guidelines concerning levels: 'The level of each competence can vary from 1 to 3 depending on the nature of the task, the nature of the context and the level of independence. In determining the programme profile, for a particular field each competence must be classified at Level 1 as a minimum, and the sum of all levels must be at least 18. Programmes can define their profile by classifying one or more competences at a higher level.' (Werktuigbouwkunde, 2014). See the table below for the level distribution across each year of study.

Table 3. Level distribution by year of study.

Field competence	Year 1	Exit level
Analysing	1	3
Designing	1	3
Implementing	1	2
Controlling	1	2
Managing	1	2
Advising	1	2
Researching	1	2
Professional development	1	2
Totals	8	18

### 1.3 Justification

The study programme is committed to complying with national and international standards and guidelines concerning level and content:

Level

- [Dublin Descriptors](#)
- [Higher professional education \(HBO\) standards<sup>2</sup>](#)

Contents

- National Bachelor's profile: [Bachelor of Engineering\(BEng\)](#)
- National degree programme profile: [National profile](#)
- Study programme profile: Available from the relevant department on request.

## 2. Curriculum

See *TER Articles 14 and 16*

The tables below set out the units of study for each semester, how many credits<sup>3</sup> each unit is worth, and how the units are delivered (teaching method). These tables also show the distribution of professional tasks across the curriculum.

Key 1. Teaching methods.

L Lecture = Teaching theory to large groups

T Tuition / Tutorial = Practising learning tasks in small groups

P Project = Individuals or small groups working independently on a problem

I Independent study = Individuals studying learning materials independently

E Exercise/Lab = Lab in small groups

Table 4. Curriculum by semester

Sem	Code	Unit of study	Teaching method	EC	Competencies							
					Analysing	Designing	Implementing	Controlling	Managing	Advising	Researching	Professional development
1	VIS1	Visualize	I	5	X	X						
	MAP1	Materials & Production 1	H/E	5	X		X				X	
	MECH1	Mechanics1	H/I	5	X							
	MAC1	Measurement & control1	I/E	5	X	X	X				X	
	PRJ1	Project1	P	10	X	X	X	X	X	X	X	X
2	MECH2	Mechanics2	H/I	5	X							
	AST2	Applied sensor technology2	H/I/E/Z	5	X	X	X					X
	ELC2	Electrical circuits2	H/I/E	5	X	X	X	X		X		
	SDR2	Software design and realisation2	H/I/E	5	X	X	X	X				
	PRJ2	Project 2	P	10	X	X	X	X	X	X	X	X

3	EGT3	Energy Technics3	H/I/E	5	X	X	X			X	X	X
	ASDR3	Advanced Software Design and Realisation3	H/I/E	5	X	X	X	X		X		X
	MECH3	Mechanics 3	H/I/E	5	X	X					X	
	ELK3	Electronics3	H/I/E	5	X	X	X					
	PRJ3	Project 3	P	10	X	X	X	X	X	X	X	X
4	ELM4	Electromechanics4	H/I/E	5	X	X						
	ETS4	Electronics and Sensors4	H/I/E	5	X	X	X					
	MECH4	Mechanics 4	H/I	5	X	X	X					
	CST4	Control Systems technology4	H/I/E	5	X	X	X			X		
	PRJ4	Project 4	P	10	X	X	X	X	X	X	X	X
5	STG			30	X	X	X	X	X	X	X	X
6	MNR	Minor		30	Depends on student choices: Fontys or elsewhere, type of minor, completion of minor							
7	KMOD71	Elective module71	*	5	*	*	*	*	*	*	*	*
	KMOD72	Elective module72	*	5	*	*	*	*	*	*	*	*
	KMOD73	Elective module73	*	5	*	*	*	*	*	*	*	*
	PRJ7MEC*	Project 7 Mechatronical Engineering *	P	15	X	X	X	X	X	X	X	X
	PRJ7_Pilot	PRJ7_Pilot	P	30	X	X	X	X	X	X	X	X
	AFST	Afstuderen **		30	X	X	X	X	X	X	X	X

\* Semester 7: 3 electives (3x5 =15 EC) + PRJ7MEC (15 EC). In total 30 EC. Teaching method and competencies dependent on choice. See the appendix Electives Semester 7.

### 3. Assessment

The overview of test formats per unit of study, as well as the way in which the assessment is given and the language in which the test is offered can be found in the file **Appendix 6 Test overview**.

The written tests take place in the Dutch and German language, unless indicated otherwise with x. These last keys are in the English language.

Programme	INFORMATION TECHNOLOGY
Variant	FULLTIME
Study year	2022-2023

## Contents

1. Exit qualifications (see OER Article 13)
2. Curriculum (see OER Articles 15 and 17)
3. Assessment

# 1. Exit qualifications

See TER Article 12

This section contains information about the set of qualifications for the study programme, and indicates how this set is linked to national and international standards.

## 1.1 Set of qualifications

The study programme's set of exit qualifications is based on the national model for the systematic description of the domain of the Bachelor of ICT. The model has three dimensions:

1. Activities: What does an ICT professional do?
2. Layers of architecture: In what context?
3. Levels of proficiency.

See Paragraph 1.2 for an explanation of the three dimensions.

For the generic HBO exit qualifications the study programme is aligned with the HBO standards, which provide guidelines for a sound theoretical basis, professional conduct, research skills, and professional ethics and social orientation. These four standards are covered in the field description model [Domain Description for Bachelor of ICT – 2014, national platform HBO-I]. This means that, in principle, any study programme that bases its exit profile on this field description is automatically meeting the four HBO standards. However, the study programme believes that two of the standards, namely professional conduct and research skills, should receive greater emphasis, and it has therefore explicitly added these to its exit profile.

The study programme offers its students the option of developing an individual profile in the field of ICT. During the first three semesters, students develop a generic basic profile. During the fourth semester, this profile is expanded with an 'Advanced Software Concepts' or a 'Business Informatics' profile. In the second half of the study programme, students develop their individual profiles by making choices about their internship, minor, certain electives in Semester 7 and their graduation project. Students' final profiles are determined on the basis of their graduation project. The requirements for an individual exit profile are as follows:

Table 1. Outline of an individual exit profile

Bachelor Exit Profile	B1 Analyse	B2 Advise	B3 Design	B4 Realise	B5 Manage & Control	Research Skills	Professional Behaviour
At least one out of layers I1 to I5	2 or 3 *	2 or 3 *	2 or 3 *	2 or 3 *	2 or 3 *	3	3

\* Means that at least three of these competences must be on level 3

This means that through their graduation projects, students must demonstrate level-3 proficiency in at least three of the five activities, at any layer of architecture (I1, .. I5), as well as level-3 proficiency in the two added competences, 'Research skills' and 'Professional conduct'.

## 1.2 Explanation of the dimensions of the set of qualifications

The first dimension consists of the five activities 'manage & control', 'analyse', 'advise', 'design' and 'realise' – derived from the life cycle of information systems. Each Bachelor of ICT must be able to carry out these activities within their own professional context.

Table 2. Dimension 1 – Activity (Source: HBO-i Domeinbeschrijving 2018)

Activity	Explanation
Analyse	The activity <i>analyzing</i> is comprised of the analysis of processes, products and information flows in their collective cohesion and context.
Advise	The <i>advising</i> activity encompasses providing advice about the organization of processes and/or information for a new IT system, or one that is to be purchased or an existing IT system that has to be modified.
Design	The <i>design</i> activity encompasses the design of an ICT system (or a part thereof) as based on specifications.
Realise	The <i>realisation</i> activity encompasses the realisation of an ICT system (or a part thereof) based on a design.

Manage & Control	The <i>manage &amp; control</i> activity encompasses the control, monitoring and optimisation of the development, commissioning and use of ICT systems.
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### Layers of architecture

The second dimension consists of five layers of architecture. The layers of architecture are intended to make the substantive differentiation visible and to describe the breadth of the Bachelor of ICT profile in detail.

Table 3. Dimension 2 – Layers of architecture (Source: HBO-i Domeinbeschrijving 2018)

Layer of architecture	Description
User interaction	The architectural layer <i>user interaction</i> relates to the communication between the (end)user and the ICT system. Here, the emphasis is not on the interaction with users which takes place during the creation of an ICT system; that is already covered in each of the architectural layers.
Organisational processes	The <i>organisational processes</i> architectural layer concerns facilitating organisational processes by way of ICT systems. Here, it concerns the functionality of the system as a whole (automated and non-automated parts) as seen from the context of the organisational goals to be realised.
Infrastructure	The architectural layer <i>infrastructure</i> concerns all of the ICT-systems with which organisation processes can be facilitated. Here, it concerns the making available and keeping available and configuring of the traditional hardware infrastructure, and certainly also the software infrastructure.
Software	The architectural layer <i>software</i> concerns the development of various kinds of software. This concerns software that after commissioning can be incorporated into an ICT infrastructure
Hardware Interfacing	The architectural layer <i>hardware interfacing</i> concerns software that interacts with available hardware. Here, it concerns situations in which the software must explicitly take into account the possibilities and limitations of the available hardware. In the description within this architectural layer, 'computer system' has been chosen as the generic, all-encompassing term. Depending on the context, this can later be specified as 'embedded system', 'industrial system', 'virtual system', etc.

### Levels of proficiency

For defining the different levels of proficiency, the programme uses the level descriptions of Dimension 3 of the European e-Competence Framework (e-CF) and the level-description of the Expertgroep protocol of the Vereniging Hogescholen (Andriessen et al., 2014). The proficiency level is defined in terms of the complexity of the context, the complexity of the content and the autonomy while executing the assignment. The proficiency level is reached when two of these facets are achieved on the corresponding level. These three facets result in three different levels, with Level 1 as the lowest level, at which a student can acquire competence in one of the fields of ICT.

Table 4. Description of levels for competences (Source: HBO-i Domeinbeschrijving 2018)

		Level		
		1: task-oriented	2: problem-oriented	3: situation-oriented
Autonomy		Works under general guidelines in an environment where unpredictable changes take place.	Solves autonomously interactive issues that arise from project activities.	Works autonomously to solve interactive problems. Has a positive effect on team performance.
Complexity	Context	Structured predictable context, problem defined, approach and solution known to client.	Structured - unpredictable context, problem given, choice of approach and space for solutions limited.	Structured - unpredictable context, vague problems, approach and solution space open.
	Content	A few basic concepts that build on the pre-education.	Combination of several basic concepts and a few in-depth concepts that build on basic concepts	Combination of several concepts for delving deeper into an innovation in a local situation.

### Professional Skills

In order to successfully carry out an ICT assignment, consisting of one or more ICT professional tasks, professional skills are also required, together with the professional expertise. ICT professional tasks, professional skills and personal development are inextricably linked. In order to operationalize all this and connect it with the ICT professional tasks, the professional skills have been formulated in four areas of attention: future-oriented organization, investigative problem solving, personal leadership and purposeful interaction. The four focus areas overlap and complement each other.

Table 5. Focus areas and sub-areas of Professional Skills (Source: HBO-i Domeinbeschrijving 2018)

Focus area	Tasks	
	Sub area	Explanation
future-oriented organizing	The organisational context of ICT assignments explore making corporate, sustainable and ethical considerations and managing all aspects of carrying out the assignment.	
	Organizational context	Identifies the hallmarks and roles of the environment and knows the business legitimation.
	Ethics	Knows the ethical standards, involves social ethical themes in the judgement process, recognises own boundaries and those of others and acts accordingly
	Managing	Inventories subtasks, plans and monitors time, money, quality and ethics of the execution of the work activities, recognises opportunities and risks and ensures a future-oriented embedding of the solution in the organisation..
Researching problem solving skills	Critically consider ICT assignments from various perspectives, identify problems, finding an effective approach and coming up with appropriate solutions.	
	Approach to problems	Identifying the problem, determining the aim of solution and picking an appropriate approach
	Investigative	Being curious throughout the solving process and asking questions from various perspectives, matching these questions with fitting approach that is pragmatic, critical and based on answering sources..
	Solving	Being able to methodically and creatively solve problems, finding alternatives and critically analysing own and others' line of reasoning
Personal leadership	Being entrepreneurial in regard to the ICT assignments and personal development, while being aware of own learning capacity and keeping in mind what ambitions drive ICT professionals and/or which types of positions	
	Entrepreneurail	Being aware, seeing opportunities and seizing them, motivating oneself and others, being able to profile oneself, a team and others. Aware of own development, showing leadership and taking responsibility
	Personal development	Making a well-considered choice of study, enhancing ones' own learning capacity, recognising a learning need in oneself and acting accordingly through reflection, evaluation, demanding and giving active feedback
	Personal profiling	Examining what type of professional one wants to be in the long term, which field and type of positions one aspires to and how one can stand out from others in the branch
Targeted Interaction	Determine which partners play a role in the ICT assignment, constructively collaborate and fitting communication aimed at achieving the desired impact.	
	Partners	Attention for the various groups of collaborative partners including the stakeholders, interest groups and own team members..
	Communicate	Attention for what one wishes to communicate and the impact one wishes to make, the most appropriate form to achieve this and the actual execution thereof
	Collaborate	Attention for own role in the context of the ICT assignment, exploring and tackling the tasks involved, addressing others, searching for enrichment and building up trust in an inter-disciplinary and inter-cultural context.

### 1.3 Justification

The study programme is committed to complying with national and international standards and guidelines concerning level and content:

Level

- [Dublin Descriptors](#)
- [Higher professional education \(HBO\) standards<sup>2</sup>](#)

Contents

- National Bachelor's profile: [Bachelor of ICT](#)
- National degree programme profile: [National profile](#)
- Study programme profile: Available from the relevant department on request.

## 2. Curriculum

See TER articles 15 and 17

The schedules below indicate per semester which units of study there are, and the size – calculated in credits – of each unit of study.

The first year is served in three language variants, namely Dutch, English and German. Exceptionally, the projects in the first year (PRJ1 and PRJ2) and the modules PRC2 and DVPR are taught exclusively in English. From semester 3 onwards, all educational activities are only offered in English.

The way in which each module contributes to the development of the desired final level within the various activities and architectural layers is described in a separate scheme that is not part of these regulations.

Teaching methods key

- L Lecture = Teaching theory to large groups
- T Tuition / Tutorial = Practising learning tasks in small groups
- P Project = Individuals or small groups working independently on a problem
- I Independent study = Individuals studying learning materials independently
- E Exercise/Lab = Lab in small groups



Table 6. Curriculum by semester / Curriculum 2022

Units of study		EC's	Teaching method
Semester 1			
PRC1	Programming Concepts 1	10	L/T//E
DBS1	Database Systems 1	5	L/T//E
BUA	Business Administration	5	L/T//E
PRJ1	Project Web Application	10	L/P/I
Semester 2			
PRC2	Programming Concepts 2	5	L/T//E
DVPR	Development Processes	5	L/T//E
AADE	Analysis and Design	5	L/T//E
SKI1	Professional Skills 1	5	L/T//E
PRJ2	Project Business Application	10	L/P/I

Tabel 7. Programma per semester / Curriculum 2017 - 2021

Semester 3			
DARC	Design and Architecture	5	L/T//E
ALDA	Algorithms and Data Structures	5	L/T//E
SEAR	Applied Research and Security	5	L/T//E
DSC1	Data Science	5	L/T//E
PRJ	Reactive Systems	10	L/P/I
Semester 4 - Advanced Software Concepts			
OSCO	Operating Systems and Concurrency	5	L/T//E
UNPL	Unmanaged Programming Languages	5	L/T//E
PPAR	Programming Paradigms	5	L/T//E
DBS2	Advanced Database Concepts	5	L/T//E
PRJ4	App development and cloud computing	10	L/P/I
Semester 4 - Business Informatics			
BUPR4	Business Processes	5	L/T//E
BIN4	Business Intelligence	5	L/T//E
ACCO4	Accounting	5	L/T//E
DATW4	Data Warehouses	5	L/T//E
PRJ4	App development and cloud computing	10	L/P/I
Semester 5			
INT	Internship	30	P
Semester 6			
MINR	Minor	30	
Semester 7			
CMOD1+2	Two electives, to choose from the following set <ul style="list-style-type: none"> <li>• DSC2 = Data Science 2 (+)</li> <li>• ESD = Enterprise System Development</li> <li>• PIOT = Programming for Internet of Things (+)</li> <li>• PMAN = Project Management</li> <li>• SMART = Smart products and User interface (*)</li> </ul> (+ ) ev. multidisciplinary module, with Mechatronics (in preparation) (*) multidisciplinary module, with Mechatronics and Mechanical Engineering Refer to the Appendix 'Keuzemodules Semester 7' for details.	2 x 5	L/T//E
PRSK	Professional Skills	5	L/T//E
SOFA	Software Factory	15	L/P/I
Semester 8			
GRAD	Graduation Project	30	P

### 3. Assessment

The overview of test formats per unit of study, as well as the way in which the assessment is given and the language in which the test is offered can be found in the file **Appendix 6 Test overview**.

Tests are always presented in English. Students are allowed to give answers in Dutch, German or English, except in situations of presenting or reporting for other students. In this case, they must present/report in English.

Programme	INDUSTRIAL DESIGN ENGINEERING (IPO)
Variant	FULLTIME
Study year	2022-2023

## Contents

1. Exit qualifications (see OER Article 13)
2. Curriculum (see OER Articles 15 and 17)
3. Assessment

# 1. Exit qualifications

See *TER Article 12*

This section contains information about the set of qualifications for the study programme, and indicates how this set is linked to national and international standards.

## 1.1 Set of qualifications

The set of exit qualifications for the study programme is based on the National Degree Programme Profile – LBOP IPO (2013), which contains six competences, and is linked to the National Engineering Competences ('the BEng competences'). See Table 1.

Table 1. Study programme competences.

Consistency with National IPO Agreement regarding the minimum level	Field Competences for Higher Professional Education in Engineering							
	III	III	III	I	II	II	II	II
List of competences: The national IPO programme profile (2013)	1. Analysing (Level 3)	2. Designing (Level 3)	3. Implementing (Level 3)	4. Controlling (Level 1)	5. Managing (Level 2)	6. Advising (Level 2)	7. Researching (Level 2)	8. Professional Development (Level 2)
A. General / Project Management (Level 2)	A2.1 A7.1 A7.2 A7.3	A6.1 A6.6 A9.2	A3.1 A3.2 A8.1 A9.2	A7.1 A8.2 A8.3	All	All	All	All
B. Orientation (Level 2)	B1.1	B1.1	B1.2 B1.3 B1.4 B2.1				All	
C. Analysing (Level 3)	All	C3.1					All	
D. Developing ideas (Level 3)	D1.2	All					All	
D. Developing concepts (Level 3)	E1.3	All				E1.3	All	
F. Physical execution (Level 3)	F2.1 F2.2 F5.2	F1.2 F1.3 F3.1 F3.2 F6.4	All		F5 F6	F1.3 F6.2 F6.3 F6.4	All	

## 1.2 Levels

Diversity in qualifications, and in the desired level of proficiency in the different phases of the study programme (the programme has a first-year phase, a core phase and an engineer phase), requires the details of each level to be specified. The programme is committed to the nationally-defined level descriptions (HBO Engineering, 2016). Each level is explained with reference to three factors. The levels (1, 2, 3) are set out below, together with a brief explanation. (Source: [Bachelor of Engineering](#)).

Table 2. Description of levels.

Factors	Intake level	Level 1	Level 2	Level 3
Nature of the task	HAVO 5 / MBO 4 exit level	Simple, structured, applies familiar methods directly in accordance with accepted standards	Complex, structured, applies familiar methods in changing situations	Complex, unstructured, improves methods and applies standards to the situation
Nature of the context		Familiar, simple, monodisciplinary, in a classroom setting	Familiar, complex, monodisciplinary, in a practical setting under supervision	Unfamiliar, complex, multidisciplinary, in a practical setting
Level of independence		Supervised	Supervision if required	Independent

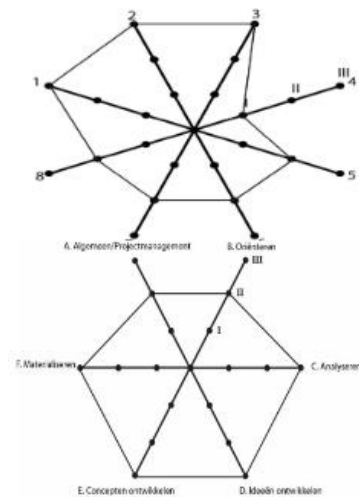
In the National IPO Agreement, the IPO study programmes set a minimum level definition for each field competence from the Bachelor of BEng profile, adding up to a minimum total of 18. The level definitions are set out in Table 1 in the document 'National Professional Programme Profile – Industrial Design Engineering' (LBOP IPO) and are presented in Spider web diagram 1 below. The IPO programmes have then translated this spider web diagram into six LBOP IPO competences, which can be found in Spider web diagram 2. For the Venlo IPO programme, it was decided that all Level 1 competences must be achieved in the first-year programme; the exit level of the competences (i.e. Level 2 or 3) must be demonstrated in the graduation project.

1	Analysing
2	Designing
3	Implementing
4	Controlling
5	Managing
6	Advising
7	Researching
8	Professional development

Figure 1. Spider web diagram 1: LBOP IPO level definitions for BEng competences

A	General/Project Management
B	Orientation
C	Analysing
D	Developing ideas
E	Developing concepts
F	Physical execution

Figure 2. Spider web diagram 2: LBOP IPO competence definitions with level definitions



### 1.3 Justification

The study programme is committed to complying with national and international standards and guidelines concerning level and content:

Level

- [Dublin Descriptors](#)
- [Higher professional education \(HBO\) standards](#)

Contents

- National Bachelor's profile: [Bachelor of Engineering\(BEng\)](#)
- National degree programme profile: [National Professional and Programme Profile](#) (LBOP) – Industrial Design Engineering Professional Education Programme (IPO)
- Study programme profile: Available from the relevant department on request.

## 2. Curriculum

See *TER Articles 15 and 17*

The tables below set out the units of study for each semester, how many credits each unit is worth, and how the units are delivered (teaching method). These tables also show the distribution of professional tasks across the curriculum.

### Key 1. Teaching methods.

L Lecture = Teaching theory to large groups

T Tuition / Tutorial = Practising learning tasks in small groups

P Project = Individuals or small groups working independently on a problem

I Independent study = Individuals studying learning materials independently

E Exercise/Lab = Lab in small groups

Table 3. Curriculum by semester.

Sem	Code	Teaching unit	Teaching method	EC	Competences IPO (LBOP)					
					A. General / Project Management	B. Orientation	C. Analysing	D. Developing ideas	E. Developing concepts	F. Physical execution
1	VIS1	Visualize 1	T	5			X	X	X	
	MAP1	Materials & Production 1	L/E	5			X			X
	MECH1	Mechanics 1	H/T	5		X	X			
	MAC1	Measurement & control 1	I/E	5			X			X
	PRJ1	Project 1	P	10	X	X	X	X	X	X
2	DSGN2	Design 2	T	5			X	X	X	
	MAP2	Materials & Production 2	L/E	5			X			X
	MECH2	Mechanics 2	L/T	5		X	X			
	CADE2	Computer Aided Design & Engineering 2	T	5			X			X
	PRJ2ID	Project 2 Industrial Design	P	10	X	X	X	X	X	X
3	FOCO3	Form and Color 3	T	5			X	X	X	X
	VISCOM3	Visual Communication 3	T	5			X	X	X	
	MECH3	Mechanics 3	L/T	5		X	X			
	CADE3	Computer Aided Design & Engineering 3	T	5			X		X	X
	PRJ3ID	Project 3	P	10	X	X	X	X	X	X
4	FOCO4	Form and Color 4	T	5			X	X	X	X
	VISCOM4	Visual Communication 4	T	5			X	X	X	
	MECH4	Mechanics 4	L/T	5		X	X		X	
	MAP4ID	Materials & Production 4	T/E	5			X		X	X
	PRJ4ID	Project 4 Industrial Design	P	10	X	X	X	X	X	X
5	STG	Internship	P	30	X	X	X	X	X	X
6	MNR	Minor		30	Depends on student choices: Fontys or elsewhere, type of minor, completion of minor					
7	KEUZE1*	Elective 1	L/T/I/P	5	Depends on student choices					
	KEUZE2*	Elective 2	L/T/I/P	5	Depends on student choices					
	KEUZE3*	Elective 3	L/T/I/P	5	Depends on student choices					
	PRJ7ID	Project 7 Industrial Design	P	15	X	X	X	X	X	X
8	AFST	Graduation	P	30	X	X	X	X	X	X

\*Semester 7: 3 electives (3x5 = 15 ECTS) + PRJ7 (15 ECTS). 30 ECTS in total

### 3. Assessment

An overview of test formats per unit of study, as well as the way in which the assessment is given and the language in which the test is offered can be found in the file Appendix 6. The written tests take place in Dutch and German.

Programme	INDUSTRIAL DESIGN ENGINEERING (IDE)
Variant	FULLTIME
Study year	2022-2023

## Contents

1. Exit qualifications (see OER Article 13)
2. Curriculum (see OER Articles 15 and 17)
3. Assessment

# 1. Exit qualifications

## See OER Article 13

This section contains information about the set of qualifications for the study programme, and indicates how this set is linked to national and international standards.

### 1.1 Set of qualifications

The set of exit qualifications for the study programme is based on the National Degree Programme Profile – LBOP IPO (2013), which contains six competences, and is linked to the National Engineering Competences ('the BEng competences'). See Table 1.

Table 1. Study programme competences.

	Field Competences for Higher Professional Education in Engineering							
Consistency with National IPO Agreement regarding the minimum level	III	III	III	I	II	II	II	II
List of competences: The national IPO programme profile (2013)	1. Analysing (Level 3)	2. Designing (Level 3)	3. Implementing (Level 3)	4. Controlling (Level 1)	5. Managing (Level 2)	6. Advising (Level 2)	7. Researching (Level 2)	8. Professional Development (Level 2)
A. General / Project Management (Level 2)	A2.1 A7.1 A7.2 A7.3	A6.1 A6.6 A9.2	A3.1 A3.2 A8.1 A9.2	A7.1 A8.2 A8.3	All	All	All	All
B. Orientation (Level 2)	B1.1	B1.1	B1.2 B1.3 B1.4 B2.1				All	
C. Analysing (Level 3)	All	C3.1					All	
D. Idea Development (Level 3)	D1.2	All					All	
E. Concept Development (Level 3)	E1.3	All				E1.3	All	
F. Materialisation (Level 3)	F2.1 F2.2 F5.2	F1.2 F1.3 F3.1 F3.2 F6.4	All		F5 F6	F1.3 F6.2 F6.3 F6.4	All	

### 1.2 Levels

Diversity in qualifications, and in the desired level of proficiency in the different phases of the study programme (the programme has a first-year phase, a core phase and an engineer phase), requires the details of each level to be specified. The programme is committed to the nationally-defined level descriptions (HBO Engineering, 2016). Each level is explained with reference to three factors. The levels (1, 2, 3) are set out below, together with a brief explanation. (Source: [Bachelor of Engineering](#)).

Table 2. Description of levels.

Factors	Intake level	Level 1	Level 2	Level 3
Nature of the task	HAVO 5 / MBO 4 exit level	Simple, structured, applies familiar methods directly in accordance with accepted standards	Complex, structured, applies familiar methods in changing situations	Complex, unstructured, improves methods and applies standards to the situation
Nature of the context		Familiar, simple, monodisciplinary, in a classroom setting	Familiar, complex, monodisciplinary, in a practical setting under supervision	Unfamiliar, complex, multidisciplinary, in a practical setting
Level of independence		Supervised	Supervision if required	Independent

In the National IPO Agreement, the IPO study programmes set a minimum level definition for each field competence from the Bachelor of BEng profile, adding up to a minimum total of 18. The level definitions are set out in Table 1 in the document 'National Professional Programme Profile – Industrial Design Engineering' (LBOP IPO) and are presented in Spider web diagram 1 below. The IPO programmes have then translated this spider web diagram into six LBOP IPO competences, which can be found in Spider web diagram 2.

For the Venlo IDE programme, it was decided that all Level 1 competences must be achieved in the first-year programme; the exit level of the competences (i.e. Level 2 or 3) must be demonstrated in the graduation project.

1	Analysing
2	Designing
3	Implementing
4	Controlling
5	Managing
6	Advising
7	Researching
8	Professional development

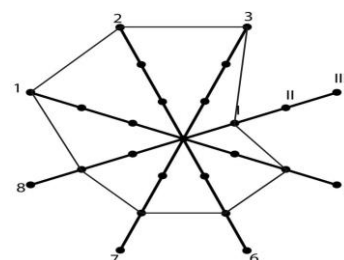


Figure 1. Spider web diagram 1: LBOP IPO level definitions for BEng competences

A	General/Project Management
B	Orientation
C	Analysis
D	Idea development
E	Concept Development
F	Materialisation

Figure 2. Spider web diagram 2: LBOP IPO competence definitions with level definitions for IDE

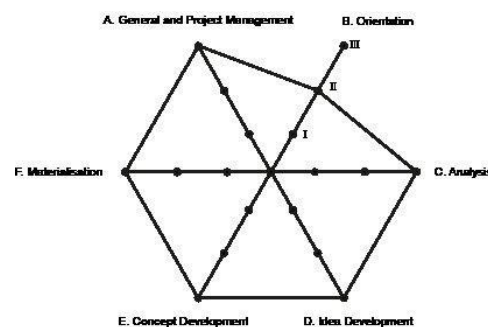
### 1.3 Justification

The study programme is committed to complying with national and international standards and guidelines concerning level and content:  
Level

- [Dublin Descriptors](#)
- [Higher professional education \(HBO\) standards](#)<sup>3</sup>

Contents

- National Bachelor's profile: [Bachelor of Engineering \(BEng\)](#)
- National degree programme profile: [National Professional and Programme Profile \(LBOP\) – Industrial Design Engineering Professional Education Programme \(IPO\)](#)
- Study programme profile: Available from the relevant department on request.



<sup>3</sup> A comparison between the HBO standards and the Dublin Descriptors can be found [here](#).

## 2. Curriculum

See *TER Articles 15 and 17*

The tables below set out the units of study for each semester, how many credits<sup>4</sup> each unit is worth, and how the units are delivered (teaching method). These tables also show the distribution of professional tasks across the curriculum.

Key 1. Teaching methods.

L Lecture = Teaching theory to large groups

T Tuition / Tutorial = Practising learning tasks in small groups

P Project = Individuals or small groups working independently on a problem

I Independent study = Individuals studying learning materials independently

E Exercise/Lab = Lab in small groups

Table 3. Curriculum by semester.\*

Sem.	Code	Unit of study	Teaching method	ECTS	IPO Competences (LBOP)					
					A. General / Project Management	B. Orientation	C. Analysing	D. Developing ideas	E. Developing concepts	F. Materialisation
1	PRP1	Professional Practice	TPIE	5	X					
	ORI1	Orientation & Research	TPIE	5		X				
	ANA1	Analysis	TPIE	5			X			
	IDG1	Idea Generation	TPIE	5				X		
	CON1	Concept development	TPIE	5					X	
	REA1	Realisation	TPIE	5						X
2	PRP2	Professional Practice	TPIE	5	X					
	ORI2	Orientation & Research	TPIE	5		X				
	ANA2	Analysis	TPIE	5			X			
	IDG2	Idea Generation	TPIE	5				X		
	CON2	Concept development	TPIE	5					X	
	REA2	Realisation	TPIE	5						X
3	PRP3	Professional Practice	TPIE	5	X					
	ORI3	Orientation & Research	TPIE	5		X				
	ANA3	Analysis	TPIE	5			X			
	IDG3	Idea Generation	TPIE	5				X		
	CON3	Concept development	TPIE	5					X	
	REA3	Realisation	TPIE	5						X
4	PRP4	Professional Practice	TPIE	5	X					
	ORI4	Orientation & Research	TPIE	5		X				
	ANA4	Analysis	TPIE	5			X			
	IDG4	Idea Generation	TPIE	5				X		
	CON4	Concept development	TPIE	5					X	
	REA4	Realisation	TPIE	5						X
5/6	Internship		P	30	X	X	X	X	X	X
5/6	Minor		Minor dependent	30	Minor dependent					

## 3. Assessment

The type of assessment and the marking method for each unit of study can be found in Appendix 6 Assessment overview. The exams are conducted in English.

<sup>4</sup> 1 credit, also known as an ECTS (European Credit Transfer System) credit, is equivalent to 28 study load hours.



Programme	LOGISTICS MANAGEMENT LOGISTICS ENGINEERING
Variant	FULLTIME
Study year	2022-2023

## Contents

1. Exit qualifications (see OER Article 13)
2. Curriculum (see OER Articles 15 and 17)
3. Assessment

## 1. Exit qualifications

### See TER Article 13

This section contains information about the set of qualifications for the study programme, and indicates how this set is linked to national and international standards.

#### 1.1 Set of qualifications

The competence sets for the programmes are based on the competences for logistics set out in the national professional profile and competence profile (logistiek, HBO Landelijk platform, 2013). The two programmes each have their own set of competencies. Each set of competencies comprises of three sub-competencies (expressed in terms of exit level), which are based on the three professional roles defined by the programme. As well as being defined by their content, these professional roles are defined by their 'level of execution', which is specified in brackets below:

- Develop (strategic)
- Set up (tactical)
- Implement (operational)

To make each sub-competency more specific, a number of facets are specified for each sub-competency. In addition, each sub-competency is associated with a set of knowledge and skills aspects. The set of sub-competences is placed in the context of five professional roles: the context in which the prospective logistics specialist is operating: production, warehousing, transport, integrated logistics (integration within the company) and Supply Chain Management (integration beyond the company). The sub-competences for each programme are set out below, along with the link to the nationally-defined competences. For Logistics Management, the Bachelor of Business Administration (BBA) competences are used; for Logistics Engineering, the Bachelor of Engineering (BEng) competences are used.

Table 1a. Exit qualifications for the LM study programme.

LM competences	Link to BBA competences		
	Research skills	Professional skills	Responsible business practices
I. Development of a logistics concept. The student is able to design or redesign a logistics concept for the various professional situations. This concept makes framework-setting statements, in line with the logistics objectives, about the focus areas of physical design (basic shape), control, information provision and organisation of staff. This explicitly establishes the relationships between the focus areas.	X	X	X
II. Setting up of a logistics concept. 1. The student is able to design or redesign, in detail, the focus areas within the logistics concept for the professional situations of warehousing, transport and production. 2. The student is able to design or redesign, in detail, for the professional situations of Integrated Logistics and SCM, the focus areas of management/control, information provision, organisation of staff and KPIs within the logistics concept, taking account of the influence of other focus areas such as physical design.	X	X	X
III. Implementation within a logistics concept. Within existing logistics processes, the student is able to provide operational leadership in the various professional situations in terms of managing, assessing, steering and maintaining relevant relationships outside of their own department.		X	X

Table 1b. Exit qualifications for the LE study programme.

LE competences	Link to BEng competences							
	Analysing	Designing	Implementing	Controlling	Managing	Advising	Researching	Professional development
I. Development of a logistics concept. The student is able to design or redesign a logistics concept for the various professional situations. This concept makes framework-setting statements, in line with the logistics objectives, about the focus areas of physical design (basic shape), control, information provision and organisation of staff. This explicitly establishes the relationships between the focus areas.	X	X			X	X	X	X
II. Setting up of a logistics concept. 1. The student is able to design or redesign, in detail, the focus areas within the logistics concept for the professional situations of warehousing, transport and production. 2. The student is able to design or redesign, in detail, for the professional situations of Integrated Logistics and SCM, the focus areas of physical design and management/control within the logistics concept, taking account of the influence of other focus areas such as information provision, organisation of staff and KPIs.	X	X			X	X	X	X
III. Implementation within a logistics concept. Within existing logistics processes, the student is able to operate in the various professional situations in terms of planning, assessing, steering and making any necessary adjustments.	X		X	X		X		X

### Old curriculum

The previous curriculum is based on the national professional and competence profile from 2007 (Landelijk Platform Logistiek, 2007). The programmes have a single competency set, which includes five competencies. The first competency ('advice/innovation around logistics processes and the underlying logistics policy') is a sector-specific competency. This competency is also referred in short as 'expertise'. It covers the knowledge and skills area of logistics. Competencies 2 to 5 ('leadership, collaboration, communication and professional skills') are general professional competencies. The competencies are given additional significance by the context in which they are applied, and this context is determined by the tasks of the logistics specialist. The profile defined in the exit qualifications is validated in the table below by linking it to national/international standards.

Table 1c. Exit qualifications for the LE and LM study programmes – old curriculum.

Exit qualifications (competencies)	Validation against Dublin Descriptors				
	D1 Knowledge and understanding	D2 Applying knowledge and understanding	D3 Making judgements	D4 Communication	D5 Lifelong learning skills
Competency 1: Advice/innovation around logistics processes and the underlying logistics policy. Also referred to in short as 'expertise'	X	X	X	X	X
Competency 2: Leadership	X		X	X	X
Competency 3: Teamwork		X	X	X	X
Competency 4: Communication				X	
Competency 5: Professional skills			X		X

### 1.2 Levels

Diversity in qualifications, and in the desired level of proficiency in the different phases of the study programme (the programmes have a first-year phase and a main phase), requires the details of each level to be specified. The programme is committed to the nationally-defined level descriptions. Each level is

explained with reference to three factors. The levels (1, 2, 3) are set out below, together with a brief explanation.

The following factors affect the level of the exit qualification:

- scope and complexity of the task;
- complexity of the professional situation (context);
- degree of independence and responsibility.

The table below describes these factors in more detail:

Table 2. Exit qualification levels (CuCo Logistiek, 2019).

Factor	level 1	level 2	level 3
Nature of the task	Simple, structured, applies familiar methods directly in accordance with accepted standards	Complex, structured, adapts familiar methods to changing situations	Complex, unstructured, improves <sup>9</sup> methods and adapts standards to suit the situation
Nature of the context	Familiar, simple, monodisciplinary, in a classroom setting	Familiar, complex, monodisciplinary, in a practical setting under supervision	Unfamiliar, complex, multidisciplinary, in a practical setting
Degree of independence	Supervised	Supervision if required	Independent

The programme has determined the level at which students must demonstrate the sub-competences. At the sub-competence level, it can be specified that these must be demonstrated at Level 1 in the first-year programme, and at Level 3 by the time of graduation. The details of these levels for each competence aspect can be found in the Study Programme Profile (CuCo Logistiek, 2019).

### 1.3 Justification

The study programme is committed to complying with national and international standards and guidelines concerning level and content:

Level

- [Dublin Descriptors](#)
- [Higher professional education \(HBO\) standards](#)

Contents

- National Bachelor's profile: [Bachelor of Engineering](#) (BEng) and [Bachelor of Business Administration](#) (BBA)
- National degree programme profile: [National profile](#)
- Study programme profile: Available from the relevant department on request.

## 2. Curriculum

See *TER Articles 15 and 17*

The tables below set out the units of study for each semester, how many credits<sup>5</sup> each unit is worth, and how the units are delivered (teaching method). These tables also show the distribution of professional tasks across the curriculum.

Key 1. Teaching methods.

- L Lecture = Teaching theory to large groups  
T Tuition / Tutorial = Practising learning tasks in small groups  
P Project = Individuals or small groups working independently on a problem  
I Independent study = Individuals studying learning materials independently  
E Exercise/Lab = Lab in small groups

Table 4a. Curriculum by semester – Joint semesters. Course based programme

Semesters 1 t/m 3 (common)					
Sem	Code	Teaching units	EC's	Teaching method	Language
1	PRO1	Warehousing	10	PLTI	NL/D/ EN
	CAS1.1	Logistiek & bedrijf	5	LTI	NL/D/ EN
	CAS1.2	Warehousing, algemeen en strategisch	5	LTI	NL/D/ EN
	CAS1.3	Warehousing, tactisch en operationeel	5	LTI	NL/D/ EN
	CAS1.4	Tools	5	LTI	NL/D/ EN
2	PRO2	Distribution	10	PLTI	NL/D/ EN

<sup>5</sup> 1 credit, also known as an ECTS (European Credit Transfer System) credit, is equivalent to 28 study load hours.

	CAS2.1	Distributie, algemeen en strategisch	5	LTI	NL/D/ EN
	CAS2.2	Transport, tactisch en operationeel	5	LTI	NL/D/ EN
	CAS2.3	Distributie, tactisch en operationeel	5	LTI	NL/D/ EN
	CAS2.4	Tools	5	LTI	NL/D/ EN
3	PRO3	Production	10	PLTI	NL/D/ EN
	CAS3.1	Productie, algemeen en strategisch	5	LTI	NL/D/ EN
	CAS3.2	Productie, tactisch en operationeel, functionele organisatie	5	LTI	NL/D/ EN
	CAS3.3	Productie, tactisch en operationeel, product georiënteerde organisatie	5	LTI	NL/D/ EN
	CAS3.4	Tools	5	LTI	NL/D/ EN

Table 4b. Curriculum by semester – LM

Semester 4 LM					
Sem	Code	Teaching units	EC's	Teaching method	Language
4	PRO4	Integral logistics LM & self-study/choice	10+5	PLTI	NL/D/ EN
	CAS4.1	Integral logistics strategic LM	5	LTI	EN
	CAS4.2LM	Integral logistics tactical and operational LM	5	LTI	EN
	CAS4.3LM	LM tools	5	LTI	EN

Table 4c. Curriculum by semester – LE

Semester 4 LE					
Sem	Code	Teaching units	EC's	Teaching method	Language
4	PRO4	Integral logistics LE & self-study/choice	10+5	PLTI	NL/D/ EN
	CAS4.1	Integral logistics strategic LE	5	LTI	EN
	CAS4.2LE	Integral logistics tactical and operational LE	5	LTI	EN
	CAS4.3LE	LE tools	5	LTI	EN

Table 4d. Curriculum by semester – Semesters 5 and 6 LM and LE.

Semester 5 LM&LE					
Sem	Code	Teaching units	EC's	Teaching method	Language
5	STG	Internship	30	I	NL/D/ EN
Semester 6 LM&LE					
Sem	Code	Teaching units	EC's	Teaching method	Language
6	MNR	Minor	30	Dependent on minor	Dependent on minor

Table 4e. Curriculum by semester – Semesters 7 and 8 LM and LE.

Semester 7 LM					
SEM	CODE	Teaching units	EC's	Teaching method	Language
7	PRO7L*	SCM PROJECT 7 & self-study/choice	15(10+5)	PLTI	NL/D/EN
	PRO7SUP1	Mastery of Professional Competencies	5	PLTI	EN
	CAS7.1	SCM Strategic & Tactical	5	LTI	EN
	CAS7.2LM	SCM Management & Control	5	LTI	EN
Semester 7 LE					
7	PRO7L*	SCM PROJECT 7 & self-study/choice	15(10+5)	PLTI	NL/D/EN
	PRO7SUP1	Mastery of Professional Competencies	5	PLTI	EN
	CAS7.1	SCM Strategic & Tactical	5	LTI	EN
	CAS7.2LE	SCM Analysis & Control	5	LTI	EN
Semester 8, LM & LE					
8	AFST*	Graduation	30	I	NL/D/EN

\* Students who started 2020-2021 in the BILL program can choose - within the guidelines of the program - to carry out a project/projects at BILL for project 7 and/or graduation.

## Old curriculum

The tables below set out the units of study for each semester and how many credits<sup>12</sup> each unit is worth. Format indicates the teaching and learning methods for the module. Alignment with the exit qualifications is guaranteed by specifying which competencies are covered in each module. The programme then tests and assesses the competencies equally across the various modules (see Section 2.4).

Table 4f. Curriculum by semester – old curriculum – common semesters

Semesters 1 t/m 3 (common)						Logistic competences				
Sem	Code	Teaching units	EC's	Teaching method	Language	C1	C2	C3	C4	C5
1	ECO1	Economie 1	2	LI	NL/D/ EN	x				
	ENG1	Engels 1	2	LTI	EN				x	
	QUM1	Kwantitatieve methoden 1	2	LI	NL/D/ EN	x				
	LOG1	Logistiek 1	2	LI	NL/D/ EN	x				
	SKI1	Soft Skills 1	2	LTI	NL/D/ EN				x	
	TEC1	Techniek 1	2	LI	NL/D/ EN	x				
	PO1	Project 1: Het Bedrijf	3	P	NL/D/ EN	x	x	x	x	x
	ECO2	Economie 2	2	LI	NL/D/ EN	x				
	ENG2	Engels 2	2	LTI	EN		x	x	x	
	QUM2	Kwantitatieve methoden 2	2	LI	NL/D/ EN	x				
	LOG2	Logistiek 2	2	LI	NL/D/ EN	x				
	SKI2	Soft Skills 2	2	LTI	NL/D/ EN			x	x	x
	TEC2	Techniek 2	2	LI	NL/D/ EN	x				
	PO2	Project 2: Productie 1	3	P	NL/D/ EN	x	x	x	x	x
2	ECO3	Economie 3	2	LI	NL/D/ EN	x				
	ENG3	Engels 3	2	LTI	EN				x	
	QUM3	Kwantitatieve methoden 3	2	LI	NL/D/ EN	x				
	LOG3	Logistiek 3	2	LI	NL/D/ EN	x				
	SKI3	Soft Skills 3	2	LTI	NL/D/ EN				x	
	TEC3	Techniek 3	2	LI	NL/D/ EN	x				
	PO3	Project 3: Warehousing	3	P	NL/D/ EN	x	x	x	x	x
	ECO4	Economie 4	2	LI	NL/D/ EN	x				
	ENG4	Engels 4	2	LTI	EN				x	
	QUM4	Kwantitatieve methoden 4	2	LI	NL/D/ EN	x				
	LOG4	Logistiek 4	2	LI	NL/D/ EN	x				
	SKI4	Soft Skills 4	2	LTI	NL/D/ EN				x	
	TEC4	Techniek 4	2	LI	NL/D/ EN	x				
	PO4	Project 4: Transport	3	P	NL/D/ EN	x	x	x	x	x
3	ECO5	Economie 5	2	LI	NL/D/ EN	x				
	ENG5	Engels 5	2	TI	EN				x	
	QUM5	Kwantitatieve methoden 5	2	LI	NL/D/ EN	x				
	LOG5	Logistiek 5	2	LTI	NL/D/ EN	x				
	SKI5	Soft Skills 5	2	LTI	NL/D/ EN					x

M&O5	Management & Organisatie 5	2	LI	NL/D/EN		x				
PO5	Project 5: Productie 2	3	P	NL/D/EN	x	x	x	x	x	
ECO6	Economie 6	2	LI	NL/D/EN	x					
ENG6	Engels 6	2	TI	EN				x		
QUM6	Kwantitatieve methoden 6	2	LI	NL/D/EN	x					
LOG6	Logistiek 6	2	LI	NL/D/EN	x					
SKI6	Soft Skills 6	2	LTI	NL/D/ENG		x		x		
M&O6	Management & Organisatie 6	2	LI	NL/D/EN	x	x	x			
PO6	Project 6: Distributie	3	P	NL/D/EN	x	x	x	x	x	x

Table 4g. Curriculum by semester – old curriculum Semester 4-8 LM.

Semester 4 t/m 8 LM						Logistic competences				
Sem	Code	Teaching units	EC's	Teaching method	Language	C1	C2	C3	C4	C5
4	D&S7	Demand & Supply 7	2	LI	EN	x				
	ECO7	Economics 7	2	LI	EN	x				
	LOG7	Logistics 7	2	LI	EN	x				
	ORGA7	Organisation 7	2	LTI	EN	x			x	
	SUR7	Surroundings 7	2	LI	EN	x	x			
	SKI7	Soft Skills 7	2	LTI	EN		x		x	x
	PO7	Project 7	3	P	EN	x	x	x	x	x
	D&S8	Demand & Supply 8	2	LI	EN	x				
	ECO8	Economics 8	2	LI	EN	x				
	LEAN8	LEAN Management 8	2	LI	EN	x				
	LOG8	Logistics 8	2	LI	EN	x				
	CHM8	Change Management 8	2	LI	EN	x			x	
	SKI8	Soft Skills 8	2	LTI	EN	x			x	x
	PO8	Project 8	3	P	EN	x	x	x	x	x
5	STG	Internship	30	I	NL/D/EN	x	x	x	x	x
6	MNR	Minor	30		NL/D/EN	Dependent on minor				
7	LAW9	LAW 9	2	LI	EN	x				
	ECO9	Economics 9	2	LI	EN	x				
	LOG9	Logistics 9	2	LI	EN	x				
	ORG9	Organisation 9	2	LTI	EN	x	x	x		
	SCM9	Supply Chain Management 9	2	LI	EN	x				
	SKI9	Soft Skills 9	2	LTI	EN	x		x	x	
	PO9	Project 9	3	P	EN	x	x	x	x	x
	LOG10	Logistics 10	2	LI	EN	x				
	ECO10	Economics 10	2	LI	EN	x				
	SCM10	Supply Chain Management 10	2	LI	EN	x				
	SCRM10	Supplier & Customer Relationship Management	2	LI	EN	x		x		
	STRAT10	Strategy 10	2	LI	EN	x				
	SKI10	Soft Skills 10	2	LTI	EN	x				x
	PO10	Project 10	3	P	EN	x	x	x	x	x
8	AFST	Graduation	30	I	NL/D/EN	x	x	x	x	x

Table 4h. Curriculum by semester – old curriculum Semester 4-8 LE.

Semester 4 t/m 8 LE						Logistic competences				
Sem	Code	Teaching units	EC's	Teaching method	Language	C1	C2	C3	C4	C5
4	INF7	Information Systems 7	2	TI	EN	x				

	LOG7	Logistics 7	2	LI	EN	x				
	TEC7	Technics 7	2	LI	EN	x				
	TLS7	Tools 7	2	LTI	EN	x				
	QUM7	Quantitative Methods 7	2	LTI	EN	x				
	SKI7	Soft Skills 7	2	LTI	EN	x			x	x
	PO7	Project 7	3	P	EN	x	x	x	x	x
	INF8	Information Systems 8	2	TI	EN	x				
	LOG8	Logistics 8	2	LI	EN	x				
	TEC8	Technics 8	2	LTI	EN	x				
	TLS8	Tools 8	2	LTI	EN	x				
	QUM8	Quantitative Methods	2	LTI	EN	x				
	SKI8	Soft Skills 8	2	LTI	EN	x	x	x	x	x
	PO8	Project 8	3	P	EN	x		x	x	x
5	STG	Internship	30	I	NL/D/ EN	x	x	x	x	x
6	MNR	Minor	30		NL/D/ EN	Dependent on minor				
7	ECO9	Economics 9	2	LI	EN	x				
	INF9	Information Systems 9	2	LTI	EN	x				
	ITR9	International Transport 9	2	LTI	EN	x				
	LOG9	Logistics 9	2	LI	EN	x				
	QUM9	Quantitative Methods 9	2	LTI	EN	x				
	SKI9	Soft Skills 9	2	LTI	EN	x	x	x	x	x
	PO9	Project 9	3	P	EN	x	x	x	x	x
	ECO10	Economics 10	2	LI	EN	x				
	INF10	Information Systems 10	2	LTI	EN	x				
	ITR10	International Transport 10	2	LTI	EN	x				
	LOG10	Logistics 10	2	LI	EN	x				
	QUM10	Quantitative Methods 10	2	LTI	EN	x				
	SKI10	Soft Skills 10	2	LTI	EN					x
	PO10	Project 10	3	P	EN	x	x	x	x	x
8	AFST	Graduation	30	I	NL/D/ EN	x	x	x	x	x

### 3. Assessment

An overview of test formats per unit of study, as well as the way in which the assessment is given and the language in which the test is offered can be found in the file Appendix 6.

Programme	MECHANICAL ENGINEERING
Variant	FULLTIME
Study year	2022-2023

## Contents

1. Exit qualifications (see OER Article 13)
2. Curriculum (see OER Articles 15 and 17)
3. Assessment

## 1. Exit qualifications

### See OER Article 13

This section contains information about the set of qualifications for the study programme, and indicates how this set is linked to national and international standards.

The study programme's set of exit qualifications is based on the national degree programme profile, which contains eight engineering competences ('the BEng competences'). The study programme defines its profile by placing an emphasis on researching, designing, constructing and producing. The set of exit qualifications is validated in the table below by linking it to national and international standards. An 'x' means that all behavioural characteristics for the field competence concerned contribute to the implementation of the Dublin Descriptor. A letter (e.g. 'a') indicates that the specific behavioural characteristic for that field competence contributes to the implementation of the Dublin Descriptor. For an explanation of the letters, see pages 17–19 of the national [Bachelor's profile](#).

Table 1. Study programme competences.

Competence from the national profile	Profile	Validation against Dublin Descriptors				
		Knowledge and understanding	Applying knowledge and understanding	Making judgements	Communication	Lifelong learning skills
	Connection with HBO Standards	St1, St3	St2, St3	St2, St4	St3	St2
BE1. Analysing	none	X	X	A, B	C, D	
BE2. Designing	Designing/developing new products and tools for a production process  Mechanical Engineers with a Higher Professional Education degree can, on the basis of customer requirements and wishes, or on the basis of market research or a preliminary study, establish a product definition and a development approach, set out in a project plan for the product to be delivered, and can generate creative concepts.	X	X	A, E	F	
	Constructing: The further development of the chosen product concept  Mechanical Engineers with a Higher Professional Education degree can examine, analyse and set up a technical system. They calculate and determine whether components should be made or purchased. They also make a considered choice about the associated production technology for each component.					



BE3. Implementing	Producing: Preparing for the manufacture of products (devices and systems) and for the commissioning and optimisation of the production systems.  Mechanical Engineers with a Higher Professional Education degree can make products and prepare, install and monitor the production process.	X	A, B	C	D	
BE4. Controlling	none	X	X	C	D	
BE5. Managing	none	X	A	B	C, D, E	
BE6. Advising	none	X	D	C	A, B, D, E	
BE7. Researching	Conducting research  Mechanical Engineers with a Higher Professional Education degree are active in the field of applied research focusing on mechanical engineering products, methods and systems, including facilities and components.	X	A	B	C, D, E	E
BE8. Professional development	none	X	X	A, B, C	D, F	X

## 1.2 Levels

Diversity in qualifications, and in the desired level of proficiency in the different phases of the study programme (the programme has a first-year phase, a core phase and an engineer phase), requires the details of each level to be specified. The programme is committed to the nationally-defined level descriptions (HBO Engineering, 2016). Each level is explained with reference to three factors. The levels (1, 2, 3) are set out below, together with a brief explanation. (Source: Bachelor of Engineering).

Table 2. Description of levels.

Factors	Intake level	Level 1	Level 2	Level 3
Nature of the task	HAVO 5 / MBO 4 exit level	Simple, structured, applies familiar methods directly in accordance with accepted standards	Complex, structured, applies familiar methods in changing situations	Complex, unstructured, improves methods and applies standards to the situation
Nature of the context		Familiar, simple, monodisciplinary, in a classroom setting	Familiar, complex, monodisciplinary, in a practical setting under supervision	Unfamiliar, complex, multidisciplinary, in a practical setting
Level of independence		Supervised	Supervision if required	Independent

For each year of study, the programme has determined the level at which students must demonstrate the competences (through their professional tasks). The programme is committed to the national guidelines concerning levels: 'The level of each competence can vary from 1 to 3 depending on the nature of the task, the nature of the context and the level of independence. In determining the programme profile, for a particular field each competence must be classified at Level 1 as a minimum, and the sum of all levels must be at least 18. Programmes can define their profile by classifying one or more competences at a higher level.' (Werktuigbouwkunde, 2014). See the table below for the level distribution across each year of study.

Table 3. Level distribution by year of study.

Field competence	Year 1	Year 2	Year 3	Exit level
Analysing	1	2	2+	3
Designing	1	2	2+	3
Implementing	1	1+	2	2
Controlling	1	1+	2	2
Managing	1	1	1	1
Advising	1	1+	2	2
Researching	1	2	2	2
Professional development	1	2	2+	3
Totals	8	12	15	18

## 1.3 Justification

The study programme is committed to complying with national and international standards and guidelines concerning level and content:

Level

- [Dublin Descriptors](#)
- [Higher professional education \(HBO\) standards](#)

## Contents

- National Bachelor's profile: [Bachelor of Engineering](#) (BEng)
- National degree programme profile: [National profile](#)
- Study programme profile: Available from the relevant department on request.

## 2. Curriculum

See *TER Articles 15 and 17*

The tables below set out the units of study for each semester, how many credits<sup>6</sup> each unit is worth, and how the units are delivered (teaching method). These tables also show the distribution of professional tasks across the curriculum.

### Key 1. Teaching methods.

L (H)	Lecture = Teaching theory to large groups
T (I)	Tuition / Tutorial = Practising learning tasks in small groups
P	Project = Individuals or small groups working independently on a problem
I (Z)	Independent study = Individuals studying learning materials independently
E	Exercise/Lab = Lab in small groups

Table 4. Curriculum by semester.

Sem	Code	Teaching unit	Teaching method	EC	Profession-specific qualifications – WTB								Profession-specific qualifications – WTB
					BE1: Analysing	BE2: Designing	BE3: Implementing	BE4: Controlling	BE5: Managing	BE6: Advising	BE7: Researching	BE8: Professional development	
1	VIS1	Visualize 1	T	5	X	X					X		
	MAP1	Materials & Production 1	L/E	5	X		X				X		
	MECH1	Mechanics 1	L / T	5	X						X		
	MAC1	Measurement & control 1	T/E	5	X		X				X		
	PRJ1	Project 1	P	10	X	X	X	X	X	X	X	X	
2	MFE2	Mathematics for Engineers 2	L / T	5	X								
	MAP2	Materials & Production 2	L/E	5	X		X				X		
	MECH2	Mechanics 2	L / T	5	X	X							
	CADE2	Computer Aided Design & Engineering 2	T	5	X	X	X				X		
	PRJ2ME	Project 2 Mechanical Engineering	P	10	X	X	X	X	X	X	X	X	
3	MD3A	Machine Design 3A	L / T / E	5	X	X	X						
	MD3B	Machine Design 3B	L / T / E	5	X	X	X						
	MECH3ME	Mechanics 3 Mechanical Engineering	L / T	5	X	X							
	MAP3ME	Materials & Production 3 Mechanical Engineering	L / T / E	5	X		X				X		
	PRJ3ME	Project 3 Mechanical Engineering	P	10	X	X	X	X	X	X	X	X	
4	DC4	Dynamics & Control 4	L / T	5	X	X							
	MS4A	Mechanical Systems 4A	L / T / E	5	X	X	X	X			X		
	MS4B	Mechanical Systems 4B	L / T / E	5	X	X	X	X			X		
	TFD4	Thermo & Fluid Dynamics 4	L / T	5	X	X							
	PRJ4ME	Project 4 Mechanical Engineering	P	10	X	X	X	X	X	X	X	X	
5	STG	Internship	P	30	X	X	X	X	X	X	X	X	
6	MNR	Minor		30	Depends on student choices: Fontys or elsewhere, type of minor, completion of minor								
7	KEUZE1*	Elective 1	L / T / Z / P	5	Depends on student choices								
	KEUZE2*	Elective 2	L / T / Z / P	5	Depends on student choices								

<sup>6</sup> 1 credit, also known as an ECTS (European Credit Transfer System) credit, is equivalent to 28 study load hours.

	KEUZE3*	Elective 3	L / T /Z/P	5	Depends on student choices							
	PRJ7ME**	Project 7 Mechanical Engineering	P	15	X	X	X	X	X	X	X	X
8	AFST**	Graduation	P	30	X	X	X	X	X	X	X	X

\* Semester 7: 3 elective modules (3x5 =15 EC) + PRJ7ME (15 EC). A total of 30 EC

\*\* Students who started 2020-2021 in the BILL program can choose - within the guidelines of the study program - to carry out a project/projects at BILL for project 7 and/or graduation.

### 3. Assessment

The overview of test formats per unit of study, as well as the way in which the assessment is given, can be found in the file Appendix 6.

All units of study are tested in the Dutch language, with the exception of units of study taught in the German language, which are tested in the German language.

**APPENDIX 2 FHTenL Regulations for Internship**

**APPENDIX 3 FHTenL Regulations for Graduation**

**APPENDIX 4 Description Program Minors FHTenL**

**APPENDIX 5 FHTenL Samenstelling**

**examencommissie\_Composition Examination Board**

**APPENDIX 6 'TOETSOVERZICHT' (assessment overview)**

can all be found on the [portal](#), as well as on the [Fontys website](#) (NL) and the [international Fontys website](#) (EN).