

***Programme-specific section of the Students' Charter,
incorporating the 2018-2020 Teaching and Examination
Regulations for the Bachelor's programme.***

HBO-ICT full-time (study programme code 30020)

of Fontys Hogeschool ICT (Fontys Institute 29)

teaching locations:

- ***Eindhoven (foundation year and post-foundation year phase of the full-time Bachelor's programme for all specialisations, with the exception of the specialisation component of the ICT & Education profile)***
- ***Tilburg (foundation year of all specialisations (semester 2 in Spring) and the full-time post-foundation year phase of the ICT & Software Engineering and ICT & Media Design programmes and the specialisation of the ICT & Education programme.***

The programme-specific section shall apply to all full-time students of the full-time students of the study programme, both the Dutch-language and the English Stream, who commence with (or retake) the first semester of their tailored or regular study programme from September 2019, and students who commence with (or retake) semester 2 of their tailored or regular study programme from February 2020.

This programme-specific section of the Students' Charter was adopted by the Institute Director on 29 May 2019, following approval by the IPC on 31 May 2018 and following approval of the PC on 31 May 2018.

The Teaching and Examination Regulations of the programme are an elaboration of the general section of the Teaching and Examination Regulations for Bachelor's programmes at Fontys. That general section for the academic year 2019-2020 was adopted by the Executive Board on 11 December 2018, subject to the approval of the student section of the CPC. The latter granted its approval on 17 January 2019.

Table of contents

A – Teaching and Examination Regulations	1
Section 1 General Provisions	1
Article 1 Definitions	1
Section 2 Admission to a Bachelor's programme	5
Article 2 Required prior qualifications	5
Article 2a Study choice check and study choice advice	6
Article 3 Requirements regarding foreign diplomas/international students	7
Article 4 Professional activity requirements	7
Section 3 Intake interview, exemptions, short-track/tailored study programmes	7
Article 5 Intake interview	7
Article 6 Exemptions	8
Article 7 Short-track/tailored study programmes	8
Section 4 Provisions on study career counselling, functional disability, administrative activities, top-level athletes scheme, student entrepreneurship	8
Article 8 Study career counselling	8
Article 9 Special facilities for students with a disability	9
Article 10 Students with board memberships	9
Article 11 Top-level athletes scheme	9
Article 11a Student entrepreneurship	9
Section 5 Study programme content	10
Article 12 Study programme profile – specialisations/differentiations – occupational requirements... ..	10
Article 13 Study programme layout	10
Article 14 Overview of units of study and credits	10
Article 15 Content of minors and other special programmes	12
Article 16 Educational activities	13
Article 16a Evaluation of teaching	13
Section 6 Tests, assessment and study progress	14
Article 17 Types of tests	14
Article 18 Overview of tests	14
Article 19 Tests and assessment	14
Article 20 Content of tests, duration of the test, test aids and test timetable	14
Article 21 Sitting <i>competency examinations</i>	15
Article 22 Registration for tests	15
Article 23 Proof of identity during tests	15
Article 24 Test marking system	15
Article 25 Test results	15
Article 26 Inability to sit tests	15
Article 27 Request for a review	16
Article 28 Re-sits	16
Article 29 Period of validity of results	16
Article 30 Final paper - Knowledge bank	16
Article 31 Study progress	17
Article 32 Advice regarding the continuation of studies	17
Article 33 Additional provisions concerning binding negative advice regarding the continuation of studies	18
Section 7 Graduation	18
Article 34 Examinations – certificates – diploma supplement	18
Article 35 Statement on departure	19
Article 36 Transfer	19
Section 8 Irregularities and fraud	19
Article 37 Irregularities and fraud	19
Section 9 Examination Board, appeals	19
Article 38 Examination Board	19
Article 39 Appeals	20
Section 10 Retention and hardship clause	20
Article 40 Retention of documents	20
Article 41 Hardship clause	20
Section 11 Final provisions and implementation	21
Article 42 Entry into force, amendments, publication and official title	21
Article 43 Transitional provisions	21
Article 44 Unforeseen cases	21
Appendix 1 Exit qualifications of the specialisations	22
Appendix 2 Minor regulations of the programme minors	27

Appendix 4 Criteria for Professional Development	44
B - Study programme setup and support facilities	47
C - Internal complaints procedure	47

A – Teaching and Examination Regulations.

Section 1 General Provisions

Article 1 Definitions

Main subject	A specific definition of the post-first year programme.
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 assesses the extent to which the student has acquired certain competencies.
Occupational requirements	The legal requirements to which the practice of a particular profession is subject (<i>Section 7.6 of the WHW</i>).
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.
The 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 and approved by the Examination Appeals Board and approved by the Executive Board.
Executive Board	The administrative body of Fontys University of Applied Sciences, as described in the articles of association and the WHW.
Profiling Fund Board	Board charged by the Executive Board with implementing the Profiling Fund scheme, formerly known as the FSS Board.
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.
CROHO	Central Register of Higher Education Study Programmes, which is a register of all study programmes. Students who pass the interim examinations of a study programme registered in CROHO are entitled to an official higher professional education diploma with the associated degree (Associate degree, Bachelor or Master).
CfP	Centre for Participation (<i>Centrum voor Medezeggenschap</i>). The CfP is the internal Fontys partner of the participation bodies and consultative bodies and their discussion partners with respect to optimising how these bodies function.
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.
Deficiency	Any required prior qualification(s) a student lacks.
Differentiation	A specific definition of the curriculum within a programme, from the start of the programme that contributes to the development of generic or specific competencies aimed at deepening a specific area of knowledge in the professional field, application throughout the programme.
Diploma with subject combinations	'Old' HAVO or VWO diplomas with subject combinations. These diplomas were issued before subject cluster or profile-based diplomas were introduced to the HAVO and VWO systems (as of 1998).
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 a programme that 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	<i>Dienst Uitvoering Onderwijs</i> , the education agency of the Dutch Government
ECTS	European Credit Transfer System. The system that is used to express credits in order to facilitate international comparison. Also see: credits
Exit qualifications	Qualifications students must have on completing the study programme.
Experience Certificate	A report relating to the recognition of acquired competencies issued by a recognised RPL provider.
EVC (RPL)	<i>Erkenning van eerder Verworven Competenties</i> (Recognition of Prior Learning).
Examination	Completion of (the foundation-year phase of) a study programme or of an associate degree programme. The final examination may also include a supplementary assessment conducted by the Examination Board.
Examination Board	The board of persons referred to in Section 7.12 of the WHW.
Examiner	Member of staff who is designated by the Examination Board to administer examinations and assess the results thereof or an external expert.
Fontys minor	Provided that any admission requirements of the minor are met, a minor that is open to all Fontys students, with a focus on overarching and distinctive themes.
Fraud	Any act (including plagiarism) or omission, which the person concerned knew or ought to have known would make an accurate assessment of a person's knowledge, insight, skills, competencies, professional attitude, powers of reflection, etc. partially or wholly impossible.
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, WHW</i>).
Principle	All study programmes offered are based on one of the following principles: general special education (<i>algemeen bijzonder onderwijs</i> , ab), Roman Catholic (RC), Protestant Christian (PC) or a combination of general special education, Roman Catholic and Protestant Christian (ab, RC, PC).
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/she	Wherever 'he/him' is used in these rules, this should also be understood to mean 'she/her'.
IELTS	International English Language Teaching System, a tool used to determine a student's command of the English language.
IPC	Institute Participation Council
Institution	Fontys University of Applied Sciences
Institute	The operational unit at Fontys that is, in particular, responsible for organising Fontys' core competencies and that executes the primary processes.
Institute Director	The staff member charged with running a Fontys institution.
Intake assessment	Portfolio-assessment conducted at the student's request to validate earlier learning experiences from before the student enrolled in the study programme. The intake assessment is essentially a test that is not connected to the learning pathway, which the student takes before being enrolled. Fontys charges a cost-effective fee for the 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 is a global assessment, that the student cannot derive rights from.
Tailored programme	Special programme which differs from the standard programme.
Major	That part of the Bachelor's programme with a study load of 210 credits which contributes to the competencies associated with the programme and which is directly related to the study programme's registration in the CROHO.
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 educational activities, the testing and the completion of a minor. The regulations of all minors offered by Fontys can be found on the Fontys website . 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.
OC	Programme Committee, a committee for a study programme of an institute as referred to in Section 10.3c of the WHW (see Participation Council and Programme Committee Regulations).
OER (TER)	Teaching and Examination Regulations. The OER or 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.
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, insight, 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.
Educational activities	The education that is offered, which students may use to support their learning process.
Study programme	A coherent unit of educational activities aimed at achieving the well-defined objectives in the area of knowledge, insight and skills, which the person completing the study programme should possess. All study programmes are documented in the CROHO.
Programme minor	A minor which can only be followed by students from a specific domain or study programme and which focuses on 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.
Principal institute	The principal institute is the Fontys Institute which holds final responsibility for the development, implementation, assessment and improvement of the minor programme.
Portfolio	A collection of documents (or products), 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.
Foundation year	First phase of a Bachelor's programme, also known as the <i>propedeuse</i> .
Profiling Fund Scheme	<u>Scheme</u> providing support to Fontys students in the form of graduate funding, committee member grants or holiday allowances from the profiling fund, now known as the Financial Support Scheme (FSS).
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 students' interests, providing assistance when problems occur and providing information and advice. The student counsellor is part of the Student Facilities Service (<i>Dienst Studentenvoorzieningen</i>).
Student Career Centre	Service provided by the Student Facilities Service (<i>Dienst Studentenvoorzieningen</i>) to help students with issues involving admission, transfer to another study programme/institution or the termination of their studies.

Student Entrepreneur Scheme	<u>Scheme</u> that is intended to help Fontys students who are deemed student entrepreneurs to combine entrepreneurship and study.
Students' Charter	The <u>charter</u> in which the rights and obligations of students are laid down, divided into an institution-specific section and a study programme-specific section.
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).
Academic year	The period from 1 September up to and including 31 August of the following year.
Study choice 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 check advice	<u>Recommendation</u> provided to a prospective student who has participated in the study check with regard to his choice of Bachelor's or Associate Degree programme.
Study load	The standardised time investment expressed in units of 28 study load hours related to a study programme.
Study career counsellor	Counsellor tasked with assisting students with issues such as study planning, taking the right approach to their studies, making the right choices and the progress of their academic careers.
Study career support	Support system that focuses on the individual student's development. The student is encouraged to reflect on his own development as a future professional and to take responsibility for this development. Also known as semester coach.
Study programme	A coherent ensemble of educational activities, which a student follows as a result of his programme.
Credits	One credit is equivalent to 28 standardised study load hours. Students are awarded credits on passing the interim examination of a unit of study. The international term for credits is European Credits (ECs).
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 parts.
Test	Instrument used to assess whether a student has certain knowledge, insight, skills and/or competencies.
Top-level athletes scheme	<u>Scheme</u> for top-level athletes that specifies which students are eligible and, if so, what facilities that they may use.
Executive institute	A Fontys institute responsible for the execution of a minor.
FHICT programme guide	The programme guide contains all the information of all educational activities. The programme guide is published on the Fontys website as an attachment to the TER 1 week before the start of the semester.
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 educational activities.
Exemption	Full or partial exemption from meeting enrolment and/or admission conditions and/or exemption from sitting interim examinations.
WEB	Adult and Vocational Education Act (<i>Wet Educatie en Beroepsonderwijs</i> , WEB; Government Gazette 501, 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; Government Gazette 593, 1992, and later supplements and amendments).

Programme-specific definitions

Professional product	<i>Final result of the student's portfolio.</i>
Course-based learning	<i>A fixed learning pathway offered, in which the learning outcomes and the road to those outcomes are determined by the study programme.</i>
DAT	<i>Differential Aptitude Test, code DAT-HRM 2007. This test is used as part of the admission assessment.</i>
Demand-based learning	<i>A flexible learning pathway, in which the learning outcomes are determined by the study programme and the student makes his own choices in respect of the road to those outcomes.</i>
Main phase	<i>The post-foundation year phase of a Bachelor's programme.</i>
Learning outcomes	<i>A learning outcome is a statement on what the learner is expected to know, understand and be able to handle at the end of the learning process, and how the learner demonstrates this.</i>
Tailored track	<i>A programme or track that allows a student to complete a certain unit of study from the curriculum in an alternative manner if they have not received a passing grade. To that end, the student enters into a tailored contract with the Examination Board, which outlines how the student will demonstrate the necessary knowledge and skills. If the student refuses the tailored track or programme offered or fails to present the Examination Board with an acceptable contract by the proposed deadline, the student must demonstrate the units of study in the regular way. The teachers supervising the student's tailored track will assess whether the student has met the requirements agreed upon. Students are not automatically entitled to a tailored track. Rather, it is an option that is offered to them by the Examination Board at the recommendation of the examiners.</i>
Teaching period	<i>A number of connected educational activities ('blocks'), which are carried out within a quarter or semester. A teaching period or 'block' is between 224 study load hours and 840 study load hours.</i>
Open learning	<i>An open learning pathway, in which the learning outcomes and the road to those outcomes are determined by the student.</i>
FHICT Programme Guide	<i>The programme guide contains all the information of all educational activities. The programme guide shall be published on the Fontys website 1 week before the start of the semester, as an appendix to the TER.</i>
Semester coach	<i>A teacher in the role of study career support for a semester.</i>

Section 2 Admission to a Bachelor's programme

Article 2 Required prior qualifications

1. Only students with diplomas awarded on completing pre-university education (VWO) or senior general secondary education (HAVO), profile-based, or senior vocational education (MBO) in middle management as well as students who 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*). If a shortened track is offered, additional conditions apply for admission, which have been worked out in further detail in Article 7.
2. 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 shall also be entitled to admission to a Bachelor's programme at a university of applied sciences. Students must, however, meet any specific requirements regarding previous qualifications (paragraph 4) and any further additional requirements (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. This right to enrolment shall not apply if the Executive Board can prove that there is a substantial difference between the general admission requirements in the territory of the country concerned and the general requirements under or pursuant to the WHW (*Section 7.28 of the WHW*).
4. *The following additional prior qualification requirements shall apply to the Bachelor's programme:*
 - a. *There are no additional prior qualification requirements for HAVO and / or VWO diplomas.*
 - b. *There are no additional prior qualification requirements for MBO-4 diplomas.*
 - c. *There are no additional prior qualification requirements for HBO/WO foundation year diplomas.*

5. There are no additional requirements for enrolment in the Bachelor's programme.
6. 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 be eligible for exemption following an entrance examination (*Section 7.29 of the WHW*) (also see *Article 3(3)*).
The aim of this examination is to determine the student's suitability to take part in the Bachelor's programme as well as their command of the Dutch language.
Students must meet the following requirements at the entrance examination:
Students shall take part in the Differential Aptitude Test (DAT) and must achieve at least the following scores: a minimum of 5 points for the Vocabulary and Use of Language components and an overall score of at least 40 points.
Students shall be notified of the results of the entrance examination within two weeks.
If the prospective student should apply for enrolment on the basis of an experience certificate (issued by an acknowledged Recognition of Prior Learning (RPL) centre), this certificate will be used to determine the student's suitability to take part in the Bachelor's programme as well as their command of the Dutch language.
7. The Executive Board has declared that 'old' HAVO and VWO diplomas with subject combinations shall be at least equivalent to the 'new' diplomas with subject cluster requirements. Consequently, prospective students holding these types of diploma may be admitted. Students must, however, meet any specific 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
8. Where a student applies for admission to a study programme based on a diploma other than one of the diplomas mentioned above, the institute director shall decide whether that diploma is equivalent and if it grants access to the study programme. Students must, however, meet any specific requirements regarding previous qualifications (paragraph 4) and any further additional requirements (paragraph 5) (*Section 7.28 of the WHW*).
9. Admission to the study programme is *not* subject to an admission quota in accordance with Sections 7.53, 7.54, 7.56a and 7.57a of the WHW.

Article 2a Study choice check and study choice advice

1. The study choice check consists at least of completing a digital questionnaire and a contact session with the programme.
For international students as referred to in the Study Choice Advice Regulations, the study choice check also consists of completing a digital questionnaire and a contact session with the study programme.
2. Prospective students shall receive a link to the digital questionnaire within 4 weeks following their application. Within 4 weeks following completion of the questionnaire, the prospective students shall receive an invitation to the contact session with the programme.
International students as referred to in the Study Choice Advice Regulations will receive further information on the study choice check within 4 weeks following their application.
3. The digital questionnaire may be completed between *15-10-2019 and 1-9-2020*.
The study choice activities for international students take place in the period from 1 February to 1 June.
4. The contact sessions shall be scheduled for the months of *March, April, June, July and August for regular enrolment and December and January for February enrolment*.
The contact sessions for international students shall be scheduled in the period from 1 February to 1 June.
5. The contact sessions consist of *an afternoon of activities consisting of information and trial lessons. If the future student wants one, a face-to-face consultation with the student can be scheduled. If the future student does not participate in the afternoon of activities, an individual meeting with the student will be scheduled. Future students who enrol after 1 May will receive a binding study advice on the basis of a questionnaire and a meeting.*
The contact session for international students consists of a personal meeting which, for students living abroad, will take place over Skype.
6. Following the contact session, prospective students are sent an email within 10 days containing their study choice advice.
7. There are four types of study choice advice:
 - A - good compatibility with the programme;
 - B - compatibility with the programme in some areas;
 - C - compatibility with the programme doubtful;
 - D - student incompatible with the programme.

8. Students will be given recommendation A in the following cases:

The student:

1. has interests and skills that match the study programme profile;
2. has considered many study possibilities;
3. has a clear idea of the requirements of attending the HBO-OCT programme;
4. is driven and excited to undertake the programme.

In the case of students who require additional facilities due to dyslexia or autism spectrum requirements, such aspects shall not affect the study choice advice.

Students will be given recommendation B in the following cases:

- The student meets three of the foregoing criteria.

Students will be given recommendation C in the following cases:

- The student meets two of the foregoing criteria.

Students will be given recommendation D in the following cases:

- The student meets fewer than two of the foregoing criteria.

9. The foregoing study choice advice shall not be binding to prospective students who have applied by May 1. Applications for enrolment after May 1 shall be refused, unless there are circumstances such as are referred to in Article 2, paragraph 2 or the case pertains to students referred to in Article 3, paragraph 3 of the Study Choice Advice Regulations.
10. The Study Choice Advice Regulations shall determine the categories of students to which the Study choice check does not apply. For these groups of students, the study choice advice shall not be binding either.

Article 3 Requirements regarding foreign diplomas/international students

1. Holders of a foreign diploma may not sit tests for which credits are awarded 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*).
Students shall be required to have a command of the Dutch language at Nt2 level, programme II (all 4 components). The certificates 'Nederlands als Vreemde Taal', 'Profiel Taalvaardigheid Hoger Onderwijs' and 'Profiel Academische Taalvaardigheid' (CNaVT-PTHO and PAT) may be considered equivalent.
2. The institute director may also decide that a student with a foreign diploma may be admitted after the student has demonstrated that he has an adequate command of the Dutch language (*Section 7.28 of the WHW*).
Students shall be required to have a command of the Dutch language at Nt2 level, programme II (all 4 components). In addition, holders of a foreign diploma shall be required to sit an additional language test. An intake interview will take place following the results of this additional language test. A recommendation is made regarding whether the programme is deemed feasible in terms of language skills based on the results of the language test and the intake interview.
3. Students with a foreign diploma seeking admittance by virtue of an entrance examination as referred to in Article 2, paragraph 6, shall be at least 21 years of age.
4. Foreign students from outside the EU who are 18 years of age or older on the date of their first enrolment must hold 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 may be withheld once during the course of each study programme.

Article 4 Professional activity requirements

1. *The study programme only exists as a full-time programme, in which case any professional practice environment shall not be subject to any requirements.*

Section 3 Intake interview, exemptions, short-track/tailored study programmes

Article 5 Intake interview

1. Students entering a study programme may be obliged to take an intake interview if they have competencies previously acquired elsewhere. Students may include proof of competencies previously acquired in their portfolios that is to be assessed or may use the foregoing to substantiate a request for exemption before the Examination Board.
2. Students who return after an interruption in a study programme in which they were previously enrolled shall be required to take an intake interview to determine which part of the study programme must still be completed. No intake interview is needed if agreements regarding return 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 he receives advice regarding the continuation of studies.

3. A study programme will be drawn up based on the assessment of the competencies previously acquired. This study programme shall be subject to the approval of the Examination Board.

Article 6 Exemptions

1. The institute director may exempt a student from the foundation year examination if the student holds an equivalent Dutch or foreign diploma (*Section 7.30 of the WHW*). (*In the case of students who hold a foreign diploma, also see Article 3.*)
2. Students who believe they are eligible for such 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 the student can demonstrate that he has already met the requirements of the examination in question. All exemptions are recorded in the study progress system. The period of validity of the exemption shall be stated in the exemption decision.
3. The Examination Board may grant an exemption from a minor on the basis of the certificate of an accredited Bachelor's or Master's programme or a piece of evidence showing that the student has passed a minor with an accredited Bachelor's or Master's programme, provided that this minor does not have a substantial overlap with the Bachelor's study programme the student is following. Exemptions on the basis of study results achieved with an accredited Bachelor's or Master's programme can only be granted if the student can provide evidence showing that, through this study programme, he has received results worth at least 30 credits (in the post-foundation year phase if it concerns a Bachelor's programme) and these results do not have a substantial overlap with the Bachelor's programme the student is following.

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 a substantiated application to that effect to the Examination Board. The application must contain a recommendation from the study career counsellor on the matter. The organisation of the study programme must be able to accommodate the short-track option.
2. *No short-track programmes shall be offered except in the case where individual agreements have been made with schools. In the case of an agreement with an MBO programme, the Examination Board shall, at the request of the student, make a decision regarding whether or not to grant access to a short-track programme based on an intake interview.*
3. *Incoming students with a VWO (pre-university education) diploma may qualify for a shortened track offered for ICT & Software Engineering, in addition to the regular bachelor's programme. Admission to this track is possible if students meet the following criteria:*
 - *The student has a VWO (pre-university education) diploma with maths B; or*
 - *The student has a foundation-year certificate of a similar study programme with a university of technology.*

These students will be given the option of doing the unit of study 'ICT orientation' in independent study before the start of the programme. Through a pre-assessment that tests their independent study, it will subsequently be determined whether they will be exempted from this unit of study.

4. If a tailored track is offered to students who (following an intake interview or intake assessment) will be following the study programme via a shortened track, such tracks shall be detailed in this document. *The shortened track referred to in paragraph 3 is worked out in further detail in Article 14, paragraph 8, in the table 'ICT & Software Engineering internship Short-Track'.*
A proposal for another tailored track may be included at the presentation of the evaluation of the intake interview. The Examination Board shall determine whether such a proposal shall be approved either as a whole or in part.

Section 4 Provisions on study career counselling, functional disability, administrative activities, top-level athletes scheme, student entrepreneurship

Article 8 Study career counselling

1. Every student shall be supervised by a study career counsellor.
2. The student shall determine how best to work on his development and how to shape the learning process in consultation with his student career counsellor.
3. The student shall consult his student career counsellor regarding the progress of his learning process.

4. The study career counsellor shall conduct support and orientation interviews with the student in the foundation year. *These meetings are recorded in the Studycoach (SC) Dashboard. Students shall be allowed to inspect this and have the right to request that the Semester Coach remove the data.*
5. The student may submit a request to the institute director to be assigned a different study career counsellor if he can argue and substantiate such a request.
6. In the foundation year, students for whom Dutch is a second language may submit a request to the Examination Board for additional time during (interim) examinations and tests. The foregoing privilege shall only be granted provided that students can demonstrate that they will be able to use such facilities to achieve a better command of the Dutch language.

Article 9 Special facilities for students with a disability

1. Students with a disability shall be legally entitled to effective adjusted facilities, unless such facilities would burden the institute disproportionately (*Section 7.13 of the WHW*).
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 resources.
3. Students who wish to make use of adjusted facilities must submit a written and substantiated application to the Examination Board to that effect in a timely manner. If necessary, the Examination Board shall seek expert advice on the matter before taking a decision. If the Examination Board should deem it necessary before taking a decision, it may confidentially inspect the medical certificate that may be available from the student counsellor, provided that the student has not objected to the foregoing. The Examination Board shall take a decision on the matter within four working weeks following receipt of the application, unless an application warrants further investigation. In such cases the student shall 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, only a single application shall be required for the entire study programme; in all other cases once per examination period or academic year. In its decision to grant the facilities, the Examination Board may also rule that these shall apply to the entire duration of the student's study or that the student is to consult with his study career counsellor annually to discuss whether the facilities are still adequate.
5. At the beginning of the academic year the institute shall inform students regarding the possibilities for special facilities. Students shall be informed of their right to consult a student counsellor.

Article 10 Students with board memberships

1. Students may include any board membership as part of their portfolios. In order to do so, they must describe, in consultation with their study career counsellors, how that board membership can contribute to the acquisition of one or more competencies of their Bachelor's programme.
2. Board memberships may be listed on the diploma supplement. Students must request the listing at least 6 weeks prior to the *graduation ceremony* via the study programme administration.
At the request of the student's study programme, the Centre for Participation (CfP) will confirm that the student has been an active board member of the CPC. In the case of board memberships of the PC or IPC, the study programme may request confirmation from the relevant IPC or PC.
The board of the FH ICT shall at the request of the student confirm that the student has been an active board member for the study association of the FH ICT.
3. Students who believe that their board memberships demonstrate that they have the knowledge, insight and/or skills, etc. that are assessed in particular tests for which credits are awarded may apply for an exemption from such tests from the Examination Board.
4. A student may also apply to be included under the Profiling Fund Scheme on the basis of his administrative activities and submit a request to his institution for an attendance allowance or for a board membership scholarship from the Profiling Fund Board. Also see Article 14 Participation Council and Programme Committee Regulations.

Article 11 Top-level athletes scheme

Students to whom a Top-level athlete or Talent status has been granted can make use of the facilities of the Top-level athletes scheme. Facilities regarding the adjustment of examinations or examination timetables, an adjusted arrangement regarding compulsory attendance, working in groups, and an adjusted internship must be applied for with the top-level athletes scheme contact. Advice regarding the continuation of studies shall be deferred for students with top-level athlete status (see Article 32).

Article 11a Student entrepreneurship

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 educational activities, working in groups and an adjusted internship. All requests for such facilities should be submitted to the Secretary of the Examination Board. Advice regarding the continuation of studies may be deferred for students with student entrepreneur status (see Article 32).

Section 5 Study programme content

Article 12 Study programme profile – specialisations/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. *The study programme profile is laid down in appendix 1.*
2. The study programme has the following specialisations:
 - ICT & Applied Data Science*
 - ICT & Business*
 - ICT & Cyber Security*
 - ICT & Education*
 - ICT & Game Design and Technology*
 - ICT & Management and Security*
 - ICT & Media Design*
 - ICT & Smart Mobile*
 - ICT & Software Engineering*
 - ICT & Technology*

The Cyber Security, Game Design and Technology, and Smart Mobile specialisation shall not be offered if there are fewer than 18 participants.

This study programme is provided under the *general special education* principle.
3. There are *no* specific occupational requirements for this study programme.

Article 13 Study programme layout

1. Each Bachelor's programme shall have 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 to make suitable choices.
2. A Bachelor's programme shall have a study load of 240 credits with a nominal study load of 60 credits per academic year. *Each programme shall consist of a major with a study load of 210 credits and a minor of 30 credits.*

Article 14 Overview of units of study and credits

1. Every study programme shall consist of a coherent set of units of study, which are components of a study programme concluded with an interim examination. Units of study shall not exceed a study load of 30 credits.
2. Only whole credits shall be awarded for units of study.
3. Any courses or assessments provided in a foreign language shall be offered in accordance with the Code of Conduct for Education in a Foreign Language and the overview of units of study shall mention what courses or assessments are offered in a foreign language.
4. *The foundation year phase is offered in two different teaching methods: demand-based learning and course-based learning. Demand-based learning means that the education is based on demand. This will be offered in Dutch. Course-based learning means that the education is supply-oriented. This will be offered in English. The learning outcomes of the various teaching methods are the same. When enrolling, students can choose between the teaching methods.*

The main stage consists of three different teaching methods: demand-based learning, course-based learning and open learning. Open learning means that the student schedules his curriculum himself. In the main stage, students can change teaching methods every semester. In the main stage, the lesson material is in English and, where required, the units of study are offered in English.
5. *Units of study shall be assessed by examiners at the end of the semester based on a portfolio assessment. The portfolio may consist of professional products that have been handed in, written tests on knowledge, feedback given and received, etc. Throughout the semester, the teaching staff will give feedback on this. The content of the portfolio is meant to demonstrate the knowledge, insight and skills required for the relevant unit of study. The FHICT programme guide shall outline the content and requirements regarding the portfolio.*
6. *Continuation shall be determined by whether or not students achieve a passing grade for the unit of study. If a student has not achieved a passing grade for a unit of study, he shall be required to follow the relevant unit again. The examiners assessing the unit of study at the portfolio assessment may advise*

students regarding an alternative tailored track to complete the unit of study instead of their having to retake the unit of study as is usually required. A recommendation of that nature shall take place if the examiners, on the basis of the student's knowledge, insight and skills, feel that the student should benefit more from an alternative tailored track. The student shall be entitled to refuse the option of the tailored track. The content of this tailored track shall depend on the assessment of the portfolio and shall be laid down in a tailored track contract between the student and the Examination Board in Week 3 of the following semester.

If the examiners see no reason to recommend a tailored track, the student shall be required to retake the semester.

7. The table below provides an outline of the allocation of credits.

Where the indicated assessment scale is U / S / G / O, this always means Unsatisfactory/ Satisfactory/ Good/ Outstanding.

8. The new curriculum is still being developed and will be supplemented every year.

Specialisation ICT & Business

Specialisation ICT & Business, foundation year phase

Unit of study	Credits	Foreign language	Test type	Assessment Indiv. or group	Assessment scale
First semester*	30		Portfolio assessment	Individually	U/ S/ G/ O
Semester 2 ICT & Business: Process improvement in SMEs	30		Portfolio assessment	Individually	U/ S/ G/ O
Total	60				

* Within the first semester, the demonstrated learning outcomes must be in line with ICT & Business.

Specialisation ICT & Infrastructure

Specialisation ICT & Infrastructure, foundation year phase

Unit of study	Credits	Foreign language	Test type	Assessment Indiv. or group	Assessment scale
First semester*	30		Portfolio assessment	Individually	U/ S/ G/ O
Semester 2 ICT & Infrastructure: Managing your Journey to the Cloud	30		Portfolio assessment	Individually	U/ S/ G/ O
Total	60				

* Within the first semester, the demonstrated learning outcomes must be in line with ICT & Infrastructure

Specialisation ICT & Media Design

Specialisation ICT & Media Design, foundation year phase

Unit of study	Credits	Foreign language	Test type	Assessment Indiv. or group	Assessment scale
First semester*	30		Portfolio assessment	Individually	U/ S/ G/ O
Semester 2 ICT & Media Design: Talent Driven Innovation	30		Portfolio assessment	Individually	U/ S/ G/ O
Total	60				

* Within the first semester, the demonstrated learning outcomes must be in line with ICT & Media Design

Specialisation ICT & Software Engineering

Specialisation ICT & Software Engineering, foundation year phase

Unit of study	Credits	Foreign language	Test type	Assessment Indiv. or group	Assessment scale
First semester*	30		Portfolio assessment	Individually	U/ S/ G/ O
Semester 2 ICT & Software Engineering: Basic Software Engineering	30		Portfolio assessment	Individually	U/ S/ G/ O
Total	60				

* Within the first semester, the demonstrated learning outcomes must be in line with ICT & Software Engineering

ICT & Software Engineering internship Short-Track

This track is only available to students with a VWO (pre-university education) diploma with maths B, who have passed the pre-assessment. Also see Article 7. The diploma received through completion of this track is equal to that of the specialisation ICT & Software Engineering with the 2nd year specialisations TUE-A and TUE-B, plus a pre-master programme of Eindhoven University of Technology (TU/e) as a minor. This diploma also makes students directly admissible to the equivalent master programme of the TU/e.

Software Engineering Short-Track, foundation year phase

Unit of study	Credits	Foreign language	Test type	Assessment Indiv. or group	Assessment scale
First semester ¹	30		Portfolio assessment	Individually	U/ S/ G/ O
Semester 2 ICT & Software Engineering: Basic Software Engineering ²	30		Portfolio assessment	Individually	U/ S/ G/ O
Total	60				

Specialisation ICT & Technology

Specialisation ICT & Technology, foundation year phase

Unit of study	Credits	Foreign language	Test type	Assessment Indiv. or group	Assessment scale
First semester*	30		Portfolio assessment	Individually	U/ S/ G/ O
Semester 2 ICT & Technology: Introduction to Technical Systems	30		Portfolio assessment	Individually	U/ S/ G/ O
Total	60				

* Within the first semester, the demonstrated learning outcomes must be in line with ICT & Technology

Article 15 Content of minors and other special programmes

- Students shall not be restricted in their choice of whether they want to follow a minor specific to a study programme, one offered across Fontys or an external minor, provided there is no overlap with the major programme (also see paragraph 2).

The programme provides the following minor programmes:

- Specialisations in ICT & Cyber Security (minor Specialisations in ICS)
- Specialisations in ICT & Education (minor Specialisations in EDU)
- Specialisations in ICT & Game Design and Technology (minor Specialisations in GDT)
- Specialisations in ICT & Smart Mobile (minor Specialisations in SM)
- Specialisations in ICT & Management and Security (minor Specialisations in MS)
- Global Acting in IT (minor GA)
- Applied Data Science (minor ADS)
- Embedded Systems (minor ES)
- Virtual Reality (minor VR)

The minors below may not be taken owing to overlap with the major programme:

¹ Through a pre-assessment, students who are admissible to this track can be exempted from this unit of study.

² The post-foundation year unit of study AS2: Academic preparation and selection must be followed and completed in the foundation year, in tandem with semester 2. Also see Appendix 3 ICT & Software Engineering Short-Track.

- *The domain minor Technology & Innovation: Educative minor for teachers and supervisors in technology' may not be followed by students who have not followed the 2nd year specialisation EDU-A or EDU-B.*
 - *The cross-Fontys minor Applied Media Technology may not be followed by students who have chosen the ICT & Media Design specialisation.*
 - *The cross-Fontys minor Cyberstars may not be followed by FHICT students.*
2. Students who wish to follow a minor programme 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 first five semesters of their studies*, unless the Examination Board grants them permission to take the minor without fulfilling this requirement. *The minor is scheduled during the fourth year.*
 3. Students must enrol for a minor before the start date as stated on the [Fontys minor portal](#) or in the minor regulations. *Other regulations from the implementing authorities may apply to minor programmes abroad or external minors.*
 4. High-achieving students may follow a minor programme in addition to their regular study programme of 240 credits. An additional minor that has been successfully completed shall be mentioned in the diploma supplement. *Within this context, a student is excellent if he is motivated and ambitious enough to want to follow an additional minor.*
 5. *Students with a study delay of a year due to the same unit of study can be required to follow an alternative track for the relevant unit of study. With this alternative track, the student can demonstrate the learning outcomes of the relevant unit of study and obtain information on other study programmes. The [FHICT programme guide](#) shall outline the content of the alternative track.*

Article 16 Educational activities

1. Below is an overview of the educational activities offered by the study programme.
The education activities are outlined in the [FHICT programme guide](#). The FHICT programme guide shall be published on the [website](#) no later than 1 week before the start of a semester.
2. The educational activities of minors shall be outlined in the minor regulations. The minor regulations of minors available across Fontys are available on the [website](#). The minor regulations of minors pertaining to the study programme have been included in [appendix 2](#).
3. Any entry requirements a student must meet before participating in an education component shall be stated in the overview referred to in paragraph 1.
The admission standards for participation in educational activities are outlined in the Advancement standards, which are included in appendix 3.
4. Participation in the educational activities in the post-foundation year phase shall be permitted after the student has passed the foundation year examination. The Examination Board may grant a student who has not yet passed the foundation year examination access to the post-foundation year phase ([Section 7.30 of the WHW](#)).
5. Students must register or enrol for the educational activities as follows:
The student must indicate his choices within the study programme through ProgressWWW. The Students' Desk shall ensure the correct setup and access of units of study in Progress. Students shall be informed of the procedure and start and closing dates for indicating the choices. Following the closing date, students may only be admitted to the required study subjects based on a positive recommendation from the Examination Board. Before the start of the programme selected, the assessors and Examination Board will check whether the choices made are in accordance with the advancement standards. Where necessary, enrolments will be adjusted. Educational activities that clearly and logically follow from the advancement standards do not have to be explicitly indicated.
6. The class (lecture) timetable shall be published on the [FH ICT intranet](#) no later than 1 week before the start of classes.
7. Students who have registered for an education component shall ensure that they meet the entry requirements of that component. The overview in Article 16, paragraph 1, indicates the education components to which participation requirements apply as well as the nature of these requirements. If the requirements concern compulsory attendance, students who are eligible for the [Top-level athletes scheme](#) or the [Student entrepreneur scheme](#) may apply to meet this requirement in a parallel group or to be exempted from this obligation (also see Article 11 and 11a).

Article 16a Evaluation of teaching

The teaching provided during the study programme shall be evaluated in the following way.
During the semester teaching (and teacher) evaluations shall be sent out to all students (with the exception of graduating students and internship students). Sessions will be scheduled for each course to discuss the

results of the teaching evaluations. Given the nature of the first semester, teaching evaluations shall also be held at the end of the opening semester. In the event of special circumstances, a second evaluation is possible at the end of the semester, upon request. In the case of internships or graduation, the teaching evaluations shall be made available to students at the end of the semester. The results of the teaching evaluation shall be published on the student platform. Improvements made as a result of the teaching evaluations are laid down in the module description booklets or on Canvas. The results of the teaching evaluations are also taken into account in the performance review cycle of teaching staff. For questions or complaints, contact kwaliiteitszorg-fhict@fontys.nl.

Section 6 Tests, assessment and study progress

Article 17 Types of tests

1. The study programme makes use of the following test types:
 - *Tests with credits* shall result in students being awarded credits upon passing those tests. Where the interim examination of a unit of study consists of various tests, the relevant credits shall be awarded once the unit of study has been passed.
 - *Tests without credits* shall provide documentary proof that can be used in the portfolio that may be evaluated during a portfolio assessment.
2. A test shall consist of an examination conducted by the examiner of a student's knowledge, insight, skills or competencies as well as an assessment of the examination results.
3. Tests are conducted either in writing or orally or using a combination of the two (e.g. product and presentation/interview).
A mixed (combined) test relates to an oral clarification regarding a professional product. Oral tests shall never be on the basis of a professional product.
4. An oral examination, including an assessment, shall be conducted by at least two examiners, with one of them acting as the principal examiner designated by the (chairman of the) Examination Board. A report must always be drawn up of an oral test to enable an assessment of the quality 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. *A combined test must also be conducted by at least two examiners.* Oral tests shall be 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 shall inform the student who is taking the test of the attendants. If the student objects, the request to attend the oral test will in any event be rejected. Any rejection by the examiner shall be substantiated. Where the Examination Board has offered students the option to sit an additional oral test by way of replacement of a regular test, that test shall always be conducted and assessed by two examiners.

Article 18 Overview of tests

The following tests shall be part of the study programme:

The tests are described in detail in the [FHICT programme guide](#) and on Canvas.

Article 19 Tests and assessment

1. The Examination Board shall designate one or more examiners for each test. An examiner may also be an external expert.
2. The assessment of minors is described in the minor regulations. The examiner of the minor shall determine whether a student has passed the tests. The Examination Board of the coordinating institute that offers the minor shall determine whether the student has passed the minor and ensure that the student receives a certificate. The result achieved for the minor shall be forwarded to the programme administration of the study programme in which the relevant student is enrolled.

Article 20 Content of tests, duration of the test, test aids and test timetable

1. The content of each test, including the learning objectives, shall be described in the [FHICT programme guide](#) and is made available to students 1 week before the start of the semester with the publication of this programme guide.
2. The examiner shall determine the period of time allowed for 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 in the programme guide.
3. The test timetable for a particular teaching period shall be announced via *email* no later than 1 week before the start of that examination period.

Article 21 Sitting competency examinations

Competency examinations shall not be offered.

Article 22 Registration for tests

No registration for tests shall be required.

Article 23 Proof of identity during tests

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

Article 24 Test marking system

1. The assignments, questions, assessment norms and criteria shall be determined by the examiners in due regard of the guidelines and instructions provided by the Examination Board. The examiner shall conduct the test and determine 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 these 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 working days of the date of the test, subject to the exceptions laid down in the Teaching and Examination Regulations. Test results shall be announced via the programme administration. The privacy of students shall be respected when test results are announced.
2. Students shall be entitled to review all assessed tests and the corresponding assessment criteria used and to be given feedback on the results.
3. Review shall be subject to the procedure described below.

The procedure shall be limited to tests that either directly or indirectly result in the assessment of a unit of study.

Direct: the test being the interim examination of the unit of study; the result of the test is to assess the unit of study. This concerns the portfolio assessments of the units of study.

Indirect: the test being a component of the interim examination of the unit of study; the result of the test contributes to the assessment of the unit of study and shall become part of the portfolio.

The procedure shall not apply to (diagnostic) tests that only provide information on the progress of the student's learning process and do not affect the final assessment of a unit of study or a component thereof.

The review procedure distinguishes between two types of tests:

A: tests where the student is (meant to be) present when the assessment is conducted by the examiner(s).

B: tests where the student is not (meant to be) present when the assessment is conducted by the examiner(s).

For type A tests, review and any feedback shall take place immediately following the assessment.

For type B tests, review and any feedback shall take place in one of the following ways:

B1: students who wish to review their test shall submit a request by email to the examiner 5 working days after the test has been assessed and announced; the examiner shall then schedule a session with the student within 5 working days, which shall take place no later than 10 working days after the request was submitted.

B2: review of the test is to be held centrally for all the students who sat the relevant test; a time shall be selected, no later than 10 working days after the test was held; time and location shall be announced no later than the original date of the test; the examiner(s) shall be present at the review session.

4. Feedback shall be provided according to the following procedure.
Feedback shall be provided during the review session.
5. Students shall receive a general email at least once a year regarding the then-current state of affairs in ProgressWWW. The email shall also provide students with the option of collecting an official, certified list of results achieved, which can be used to exercise certain rights.

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 is subject to the discretion of 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 foregoing paragraph shall be submitted in writing to the chairman of the Examination Board and include the necessary documentary evidence. The Examination Board shall then

take a decision and inform the student concerned. If the request is granted, the Examination Board will set a new date, time and place for the test. Any rejection of the request will be substantiated and the student shall 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 shall direct the request to the coordinating institute responsible for the minor, as described in the regulations governing the minor programme.

Article 27 Request for a review

1. Students who do not agree with an assessment may submit a request for a review of the assessment to the Examination Board within 4 working weeks of the date of the assessment (see Article 44 of the Students' Charter). The Examination Board shall make a decision no later than 4 working weeks after the application.
2. Students also have the option of appealing directly to the Examination Appeals Board within 6 calendar weeks of the date of the assessment www.fontys.nl/studentenloket (see Article 46 and 46 of the Students' Charter).

Article 28 Re-sits

1. Tests are conducted at least twice per academic year.
Students may re-sit components marked with a passing grade at least once, and no more than once, in which case the highest mark shall count.
A practice-based semester is a semester in which an authentic vocational task is centralized, and the student receives the necessary support in order to develop professional qualifications. As a result, with FHICT, every semester is practice-related. Resits for practice-related semesters can take place in the following semester or no later than in the following academic year. During a practice-related semester, at the student's request, teaching staff will give feedback on professional products. In this way, the student has the chance of remedying shortcomings before the final assessment of the semester. There will be at least two opportunities for written tests and submissions per semester. If the final assessment of the semester is unsatisfactory, at the initiative of the assessor the student can be offered the possibility of remedying the situation before the start of the next semester if it concerns repair of small parts. In such case, the student shall hand in an improved or supplemented portfolio of professional products for assessment.
2. Students will be offered at least two opportunities to take tests that assess the material they have learned. 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 in the FHICT programme guide.

Article 29 Period of validity of results

1. The period of validity of passed module tests is *the semester in which the student takes the module test*. Interim examination results achieved can only expire if the knowledge, the insight and the skills to which these interim examinations pertain are demonstrably out-of-date. Knowledge, insight and skills that were assessed more than 10 years ago are apparently demonstrably out-of-date.
Passed examinations shall be valid for *ten* years.
The Examination Board may extend this period.
2. In the event of special circumstances as referred to in the Profiling Fund Scheme, the term of validity of interim examinations shall at least be extended by the duration of the support granted on the basis of this scheme.
3. If the study programme has been substantially altered, details on how this period will be restricted may 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 Final paper - Knowledge bank

Students who write a final paper as part of their study programme must submit the paper digitally, as one document, to enable its filing in one or more digital knowledge bank(s). On submission of the final paper, students must also attach the signed 'Permission form for the filing and submission of a final paper to a digital knowledge bank' form. With this form, students give their permission for the final paper 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 final paper, the student and/or client and/or organisation offering the internship may indicate their objection to the final paper being entered in the knowledge bank.

Article 31 Study progress

The study programme shall be responsible for recording the test results in the programme administration. *Administrative errors may be corrected after the grades have been entered, provided it can be demonstrated that such instances were in fact cases of administrative error.*

Article 32 Advice regarding the continuation of studies

1. During the first year of enrolment in the foundation year (first-year) phase of a study programme and, where possible, prior to the start of the second semester, the student shall be given advice on the progress on his studies. If the progress of the student's studies is unsatisfactory, the student shall receive a written warning and be told that if the study progress continues to be unsatisfactory, he will receive binding negative advice regarding the continuation of his/her 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, shall be stated in the warning (*Section 7.8b of the WHW*).
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 shall be given a period within which to improve his grade point average if he has not yet done so.
The student shall be given a warning in the following cases:
if the student has not passed the first semester in the foundation year phase.
2. The study programme shall provide students with advice regarding the continuation of studies in writing before the end of their first year of enrolment (12 months) in the foundation year. In addition to an advice on continuing the study programme, the advice may also involve the subject specialisation that is to be chosen. The study advice may entail a rejection (binding negative study advice). This means that the student's enrolment with the relevant study programme will be terminated and that he cannot re-enrol for the same study programme.
3. The advice regarding the continuation of studies is based on the study results in the foundation year. The Examination Board shall make a recommendation to the institute director on the advice regarding the continuation of studies, which should be issued.
Any special circumstances relating to students shall be taken into account when establishing the advice regarding the continuation of studies. Students must report special circumstances to their student career counsellor or a student counsellor as soon as these circumstances arise.
Should students fail to report special circumstances on time, the Examination Board shall investigate whether or not the student(s) had excusable reasons for reporting these circumstances too late.
Participation in top-class sports by students to whom a Top-level athlete or Talent status as described in the Top-level athletes scheme has been granted is viewed as a special circumstance, based on which the advice regarding the continuation of studies shall be deferred.
Student entrepreneurs operating their own business who are eligible for the Student Entrepreneur Scheme, shall also be considered as being subject to a special circumstance, based on which the advice regarding the continuation of studies may be 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. Students will receive positive advice regarding the continuation of studies:
 - *if the student has passed the first semester in the foundation year phase.*Students shall receive binding negative advice regarding the continuation of studies in the following cases:
 - *if the student has not passed the first semester in the foundation year phase.*Student entrepreneurs as referred to in paragraph 3 of this Article must have earned at least N/A credits in order to be eligible for deferral of their advice regarding the continuation of studies.
5. Where there are special circumstances as defined in paragraph 3 of this Article which may have affected the credits the student obtained, the provision 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 shall be a further review of whether the student has met the criteria as defined in paragraph 4.
6. Students who submit a new enrolment request after having un-enrolled during the first year of enrolment will be given a warning from the director if the foregoing expects that the student may not be suitable for the study programme. The director shall seek advice from the Examination Board on the matter. It shall also be documented how many months of enrolment the student still has before advice regarding the continuation of studies is issued (also see Article 35).
7. Students shall only be admitted to the specialisations in ICT & Business, ICT & Infrastructure, ICT & Media, ICT & Software Engineering, and ICT & Technology in the post-foundation year phase if they meet the criteria below:
 - Students have successfully followed semester 2 of the foundation year programme within the same profile.

The reference to the correct profile shall be issued upon passing the foundation year.

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

1. If the study programme department wishes to issue a binding negative advice regarding the continuation of studies, this shall only be possible if facilities have been provided and measures put in place that acknowledge students' personal circumstances and which are aimed at ensuring successful study progress.
2. Binding negative advice regarding the continuation of studies shall be in force for a period of 7 years.
3. At a student's request, the institute director may alter this period or grant a student who, despite a binding negative advice, wishes to re-enrol, permission to do so as referred to in Section 7.8b (3) of the WHW.
Binding negative advice shall apply to the full-time, part-time and dual form of the relevant study programme, unless otherwise specified in the advice. *The advice also applies to the associate degree study programme Ad-ICT.*
4. Any binding negative advice regarding the continuation of study shall explicitly indicate that the advice only relates to the degree programme mentioned. Any binding negative advice regarding the continuation of studies must include a referral, to either another degree programme department, to the student counsellor or to the Student Career Centre.

Section 7 Graduation

Article 34 Examinations – certificates – diploma supplement

1. Students shall 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 14 (*Section 7.10 of the WHW*).
2. Certificates are issued at the following occasions:
 - on passing the foundation year examination;
 - on passing the study programme's final examination.
3. The certificate shall only be issued 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. The certificate shall be issued by the Examination Board upon passing of the examination. The certificate shall be dated on the date of the student's final academic activity. A study programme certificate shall be issued with a diploma supplement.
The Examination Board shall determine whether the student has passed no later than eight calendar weeks after the last academic activity.
If the student wishes for the certificate to be dated later, the student must defer the completion of his final academic activity.
5. The certificate shall be signed on behalf of the Examination Board by the (deputy) chairman, the (deputy) secretary, the examination candidate and, if applicable, by an external expert (*Section 7.11 of the WHW*). The Examination Board shall also confer the degree on the student on behalf of the institute, if the student has taken the study programme examination.
The degree of Bachelor of Science shall be conferred for the examination of the study programme.
6. The graduation ceremony shall take place at a time decided by the institute.
7. Students shall be issued one of the following distinctions on their certificates on the basis of extraordinary performance. The distinction 'cum laude' (English, 'with distinction') shall be the highest possible merit.
Students shall be given 'cum laude' distinction if they meet the following requirements:
The distinction 'cum laude' is not possible for the foundation year certificate.
The distinction 'cum laude' is possible for the Bachelor's certificate.
For a profile specialisation, the following 'cum laude' criteria shall apply to the Bachelor's certificate:
 - the student has passed all components of semesters 6,7 and 8 uninterrupted and
 - the graduation project has been marked Outstanding or
 - the graduation project has been marked Good and semester 6 as Outstanding*For a specialisation, the following 'cum laude' criteria shall apply to the Bachelor's certificate:*
 - the student has passed all components of semesters 6,7 and 8 uninterrupted and
 - the graduation project has been marked Outstanding or
 - the graduation project has been marked Good and semester 7 as OutstandingStudents shall be given the 'with merit' distinction if they meet the following requirements: N/A.

8. The Executive Board shall report the students who have passed the final examination of the study programme to DUO.

Article 35 Statement on departure

1. Any student who seeks to terminate his enrolment without having passed the study programme's final examination shall be invited for an interview.
2. At the student's request, the student may be issued a statement listing any results of the units of study he has passed.
3. The statement shall specify that the interim examination results achieved by the student shall in principle be valid for a period of ten years. The statement may include a provision in the event of a substantial overhaul of the study programme. Also see Article 29.

Article 36 Transfer

1. *In order to ensure a smooth transfer to a Master's programme at the TU/e, students may follow the TUE-A and TUE-B specialisation components and subsequently take a free choice minor of TU/e courses from the bridging programme or pre-master's programme. During semester 2 of the programme, an entrance test shall be taken for this track, supported by a series of courses. Further information on is detailed in the programme guide of the second semester of Software Engineering. Students who meet the admission requirements can also take the Software Engineering Short-Track programme for the same transfer.*
2. *In order to facilitate a smooth transfer to a Master's programme at the University of Tilburg, students may follow a free choice minor consisting of courses from the University of Tilburg's bridging or pre-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 or that of any of its results, the Examination Board may forgo the marking of such a test or declare the test result void. In such cases, the Examination Board shall ensure that an opportunity to re-sit the test in the near future is offered to the affected students.
2. If a student is found guilty of an irregularity (meaning a deviation of the prescribed rules or generally applicable rules of conduct) or fraud with respect to an examination or an examination component, the Examination Board may decide to deprive the student of their right to sit one or more tests as part of the degree programme for a maximum period of one year, to be determined by the Examination Board. If the test has already been assessed, the result shall be declared void.
Violations of prescribed rules concerning the procedures for testing shall also be regarded as fraud. The rules concerning the procedures for written tests and oral tests are available on the intranet.
3. In cases of serious fraud, the Examination Board may put forward a proposal to permanently terminate the relevant student's enrolment (*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 degree certificate of the degree programme or decide that the degree certificate shall not be issued unless the student concerned sits a new test or examination for the components and in a manner to be determined by the Examination Board.
5. Before taking a decision, the Examination Board will hear testimony from the student and any other interested parties. A report shall be drawn up of this hearing, of which a copy shall be forwarded to the student. The Examination Board shall inform the student of its decision without delay, either orally and in any case in writing. Furthermore, the student shall be informed of his right of appeal.
6. The Examination Board shall prepare a report of its decision and the facts on which it is based.

Section 9 Examination Board, appeals

Article 38 Examination Board

1. The institute director shall establish an Examination Board for each study programme.
2. The Examination Board's duties and responsibilities are laid down in the WHW (*Section 7.12, 7.12b and 7.12c of the WHW*). These include the following duties and responsibilities:
 - to guarantee the quality of the testing and assessment;
 - to guarantee the quality of the organisation and procedures governing testing and examinations;
 - responsibility for (the state of affairs surrounding) the conducting of tests of a study programme;
 - 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, to award applications for special facilities, and to grant requests for test re-sits;
- to determine whether an examination has been conducted in a way other than prescribed in the TER;
- approval of the details of a foreign minor or external minor;
- to make recommendations to the institute director on advice regarding the continuation of studies to be issued;

The composition of the Examination Board is laid down separately in the Composition of the Examination Board.

3. *Applications to the Examination Board may be submitted to the Secretary of the Board (also see Article 27).*

Article 39 Appeals

Students who do not agree with a decision handed down by the Examination Board may lodge an appeal against this decision with the Examination Appeals Board within six weeks after the date of the decision via www.fontys.nl/studentenloket (see Articles 45 and 46 of the Students' Charter (Section 7.61 of the WHW). Notices of appeal should preferably be submitted electronically via the portal of the Examination Appeals Board. Please see the website for further information. For assistance with an appeal, students can turn to the student counselling service. (iStudent@fontys.nl)

Section 10 Retention and hardship clause

Article 40 Retention of documents

1. The Examination Board shall be responsible for retaining the minutes of its meetings and its decisions for a period of seven years.
2. The Examination Board shall be responsible for retaining its issued statements, including statements on results achieved by students who leave the programme without a certificate, for a period of ten years.
3. The Examination Board shall ensure that the following information on each student remain in the institution's archives for 50 years:
 - information on obtaining a foundation year certificate and/or a certificate of higher professional education including the list of marks for each student.
4. The institute director shall be responsible for retaining tests/assignments, assessment criteria, test marking, passing marks, test matrixes and test analyses for a period of seven years.
5. The institute director shall be 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 shall be responsible for retaining all the final works made (papers, projects, assessments, tests, etc.), including their assessments, in which students demonstrated their command of all aspects of the final attainment level for a period of seven years after their assessment.
7. The institute director shall be responsible for ensuring that a representative set of tests, including assessments, shall be kept for two years after the assessment took place for the purposes of the external assessment of the study programme carried out as part of its accreditation.
8. The institute director shall be responsible for retaining all the works made by the student (written and unwritten, including digital works), including their assessment, with the exception of works belonging to the representative set of final works, will be destroyed or returned to the student upon the expiry of at least six months after the announcement of the assessment. This period may be extended if necessary in connection with an appeals procedure.

Article 41 Hardship clause

1. The Examination Board shall be authorised to make provisions for serious injustices that occur as a result of the application of these rules, as well as to make decisions in cases not provided for by these rules. In order to decide whether the hardship clause should be applied, the Examination Board shall 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 submit a written and substantiated application to the Examination Board for the application of the hardship clause in accordance with Article 44 of the Students' Charter. The Examination Board shall make a decision regarding the student's application and shall communicate this decision in writing, stating reasons, to the student concerned, who shall also be 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 2018-2020 academic year.
This TER only applies to all full-time students of the study programme, *both the Dutch-language stream and the English Stream, who commence with (or retake) the first semester of their tailored or regular study programme from September 2019, and students who commence with (or retake) semester 2 of their tailored or regular study programmes.*
2. The general section of these regulations and any amendments thereto shall be approved by the Executive Board, after having obtained the approval of the students' section of the Central Participation Council. Programme committees shall be given the opportunity to provide advice to the CPC. That general section of the TER shall constitute the basis on which the study programme-specific TER for each study programme shall be drawn up before being submitted to the Examination Board for their recommendation, and to the (joint) PC and the IPC for their advice/consent. The (joint) PC shall advise the institute director and shall communicate its recommendations to the IPC for informational purposes. The IPC shall advise the institute director and shall communicate its recommendations to the (joint) PC for informational purposes. The establishment of and amendments to the study programme-specific TER are effected following a proposal from the institute and require the approval of the students' section of the competent IPC and the (joint) programme committee (*see Sections 10.3c, 10.20 and 7.13 of the WHW*).
3. The text of the TER may 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 shall apply.
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, substantiated, application to the Examination Board to protest against the amendment of the rules. The Examination Board shall examine the student's application and shall base its decision on a weighing-up of the interests of the individual student on the one hand and the interests of the quality of the study programme on the other.
5. The institute director shall adopt the study programme-specific TER before 1 June of the academic year preceding the academic year that starts on 1 September; and shall ensure the publication of the study programme-specific component of these regulations and any amendments thereto by making them available for inspection at the secretariat of the study programme and by placing them on the website. The TER shall be available on the student platform ([studentenplein](http://studentenplein.nl)).
6. The official title of the Teaching and Examination Regulations of the full-time HBO-ICT Bachelor's programme of the Fontys University of Applied Sciences ICT is TER 2018-2019 HBO-ICT full time – three teaching methods.

Article 43 Transitional provisions

The following transitional provisions shall apply in the case of significant changes to the programme.

Article 44 Unforeseen cases

The Examination Board shall hand down decisions in all cases not provided for by the study programme-specific part of the TER, unless the issue falls within the competence of the institute director.

Appendix 1 Exit qualifications of the specialisations

ICT & Applied Data Science

The exit qualifications of ICT & Applied Data Science are related to the domain description of the HBOi-2018 (<http://www.hbo-i.nl/domeinbeschrijving>). This document outlines and details five key ICT competencies. In addition, it outlines and details five ICT fields of activity or professional domains for each competency at three levels of performance indicators. These performance indicators have been adapted in detail to the specific specialisation domain of Applied Data Science. The third and highest level should be regarded as the desired HBO exit level. Given the broad scope of the domains outlined, the programme is unable to achieve the very highest level in each one of these fields. Instead the highest achieved level is detailed in the table below per competency and field of activity / professional domain.

	Consulting	Analysis	Design	Realisation	Manage & control
User interaction	1	2	2	3	3
Organisational processes		2	1		
Infrastructure	1	1			1
Software	1	2	2	2	2
Hardware interfacing					

In addition, students will be working on professional development. Students shall demonstrate that professional development within the units of study, according to the exit levels described in the assessment model for professional development (see Appendix 4).

ICT & Business

The exit qualifications of ICT & Business are related to the domain description of the HBOi-2018 (<http://www.hbo-i.nl/domeinbeschrijving>). This document outlines and details five key ICT competencies. In addition, it outlines and details five ICT fields of activity or professional domains for each competency at three levels of performance indicators. The third and highest level should be regarded as the desired HBO exit level. Given the broad scope of the domains outlined, the programme is unable to achieve the very highest level in each one of these fields. Instead the highest achieved level is detailed in the table below per competency and field of activity / professional domain.

	Consulting	Analysis	Design	Realisation	Manage & control
User interaction	1	1	1	1	1
Organisational processes	3	3	3	3	3
Infrastructure	1	1	1	1	1
Software	2	2	2	2	2
Hardware interfacing					

In addition, students will be working on professional development. Students shall demonstrate that professional development within the units of study, according to the exit levels described in the assessment model for professional development (see Appendix 4).

ICT & Cyber Security

The exit qualifications of ICT & Cyber Security are related to the domain description of the HBOi-2018 (<http://www.hbo-i.nl/domeinbeschrijving>). This document outlines and details five key ICT competencies. In addition, it outlines and details five ICT fields of activity or professional domains for each competency at three levels of performance indicators. These performance indicators have been adapted in detail to the specific specialisation domain of Cyber Security. The third and highest level should be regarded as the desired HBO exit level. Given the broad scope of the domains outlined, the programme is unable to achieve the very highest level in each one of these fields. Instead the highest achieved level is detailed in the table below per competency and field of activity / professional domain.

	Consulting	Analysis	Design	Realisation	Manage & control
User interaction					
Organisational processes					
Infrastructure	2	2	2	2	2
Software					
Hardware interfacing					

In addition, students will be working on professional development. Students shall demonstrate that professional development within the units of study, according to the exit levels described in the assessment model for professional development (see Appendix 4).

ICT & Education

This specialisation will lead to a certificate with a teaching qualification. For that reason, this document lists both the HBOi exit competencies of the specialisation ICT & Education, as well as the SBL competencies of the programme for Teacher Education in secondary and tertiary technical vocational education, specialisation in ICT (LBT programme). A detailed description of the SBL performance indicators of the components provided by the LBT programme is included in the study guides and TER.

The exit qualifications of ICT & Education are related to the domain description of the HBOi-2018 (<http://www.hbo-i.nl/domeinbeschrijving>). This document outlines and details five key ICT competencies. In addition, it outlines and details five ICT fields of activity or professional domains for each competency at three levels of performance indicators. These performance indicators have been adapted in detail to the specific specialisation domain of Education. The third and highest level should be regarded as the desired HBO exit level. Given the broad scope of the domains outlined, the programme is unable to achieve the very highest level in each one of these fields. Instead the highest achieved level is detailed in the table below per competency and field of activity / professional domain.

	Consulting	Analysis	Design	Realisation	Manage & control
User interaction	2	3	3	3	3
Organisational processes	3			2	
Infrastructure					
Software		2			
Hardware interfacing					

In addition, students will be working on professional development. Students shall demonstrate that professional development within the units of study, according to the exit levels described in the assessment model for professional development (see Appendix 4).

Given that this profile/specialisation touches on the field of Education (education), a decision was made to apply (part of) the seven established competencies, used by the Stichting Beroepskwaliteit Leraren and other teaching staff (SBK), for the specialisation field, as they are outlined in the Education Professions Act (Dutch, Wet BIO), which entered into force in August 2006. The same competencies are used across the Fontys University of Applied Science for all teacher training programmes³, including for the LBT programme. The 7 competencies are the following:

1. Interpersonal competency
2. Pedagogical competency
3. Content and didactic competency
4. Organisational competency
5. Competency concerning collaboration with colleagues
6. Competency concerning collaboration with the environment
7. Competency concerning reflection and development

These competencies, just as are the HBOi competencies, are nationwide standards and have been operationalised into behavioural indicators by the Fontys teacher training programmes for both the foundation year, the core and graduation phases.

ICT & Game Design and Technology

³<http://elo.fontys.nl/CMS/Studie/Materialen%20per%20opleiding/08%20Lerarenopleiding%20Sittard/OMGAAN%20met%20PORTFOLIO/Formats%20LERO-FLOS/Competentiekaarten.pdf>

The exit qualifications of ICT & Game Design and Technology are related to the domain description of the HBOi-2018 (<http://www.hbo-i.nl/domeinbeschrijving>). This document outlines and details five key ICT competencies. In addition, it outlines and details five ICT fields of activity or professional domains for each competency at three levels of performance indicators. These performance indicators have been adapted in detail to the specific specialisation domain of Game Design and Technology. The third and highest level should be regarded as the desired HBO exit level. Given the broad scope of the domains outlined, the programme is unable to achieve the very highest level in each one of these fields. Instead the highest achieved level is detailed in the table below per competency and field of activity / professional domain.

	Consulting	Analysis	Design	Realisation	Manage & control
User interaction	3	3	3	3	3
Organisational processes					
Infrastructure					
Software	2	2	2	2	2
Hardware interfacing		2			

In addition, students will be working on professional development. Students shall demonstrate that professional development within the units of study, according to the exit levels described in the assessment model for professional development (see Appendix 4).

ICT & Infrastructure

The exit qualifications of ICT & Infrastructure are related to the domain description of the HBOi-2018 (<http://www.hbo-i.nl/domeinbeschrijving>). This document outlines and details five key ICT competencies. In addition, it outlines and details five ICT fields of activity or professional domains for each competency at three levels of performance indicators. The third and highest level should be regarded as the desired HBO exit level. Given the broad scope of the domains outlined, the programme is unable to achieve the very highest level in each one of these fields. Instead the highest achieved level is detailed in the table below per competency and field of activity / professional domain.

	Consulting	Analysis	Design	Realisation	Manage & control
User interaction	1	1		1	1
Organisational processes	2	2	2	2	2
Infrastructure	3	3	3	3	3
Software		1	1	1	
Hardware interfacing					

In addition, students will be working on professional development. Students shall demonstrate that professional development within the units of study, according to the exit levels described in the assessment model for professional development (see Appendix 4).

ICT & Management and Security

The exit qualifications of ICT & Management and Security are related to the domain description of the HBOi-2018 (<http://www.hbo-i.nl/domeinbeschrijving>). This document outlines and details five key ICT competencies. In addition, it outlines and details five ICT fields of activity or professional domains for each competency at three levels of performance indicators. These performance indicators have been adapted in detail to the specific specialisation domain of Management and Security. The third and highest level should be regarded as the desired HBO exit level. Given the broad scope of the domains outlined, the programme is unable to achieve the very highest level in each one of these fields. Instead the highest achieved level is detailed in the table below per competency and field of activity / professional domain.

Consulting	Analysis	Design	Realisation	Manage & control
------------	----------	--------	-------------	------------------

User interaction					1
Organisational processes	2	2	2	2	1
Infrastructure	3	3	3	2	2
Software	1	1			
Hardware interfacing					

In addition, students will be working on professional development. Students shall demonstrate that professional development within the units of study, according to the exit levels described in the assessment model for professional development (see Appendix 4).

ICT & Media Design

The exit qualifications of ICT & Media Design are related to the domain description of the HBOi-2018 (<http://www.hbo-i.nl/domeinbeschrijving>). This document outlines and details five key ICT competencies. In addition, it outlines and details five ICT fields of activity or professional domains for each competency at three levels of performance indicators. The third and highest level should be regarded as the desired HBO exit level. Given the broad scope of the domains outlined, the programme is unable to achieve the very highest level in each one of these fields. Instead the highest achieved level is detailed in the table below per competency and field of activity / professional domain.

	Consulting	Analysis	Design	Realisation	Manage & control
User interaction	3	3	3	3	3
Organisational processes					
Infrastructure					
Software	2	2	2	2	2
Hardware interfacing					

In addition, students will be working on professional development. Students shall demonstrate that professional development within the units of study, according to the exit levels described in the assessment model for professional development (see Appendix 4).

ICT & Smart Mobile

The exit qualifications of ICT & Smart Mobile are related to the domain description of the HBOi-2018 (<http://www.hbo-i.nl/domeinbeschrijving>). This document outlines and details five key ICT competencies. In addition, it outlines and details five ICT fields of activity or professional domains for each competency at three levels of performance indicators. These performance indicators have been adapted in detail to the specific specialisation domain of Smart Mobile. The third and highest level should be regarded as the desired HBO exit level. Given the broad scope of the domains outlined, the programme is unable to achieve the very highest level in each one of these fields. Instead the highest achieved level is detailed in the table below per competency and field of activity / professional domain.

	Consulting	Analysis	Design	Realisation	Manage & control
User interaction	3	3	3	3	3
Organisational processes					
Infrastructure					
Software	2	2	3	3	2
Hardware interfacing				2	

In addition, students will be working on professional development. Students shall demonstrate that professional development within the units of study, according to the exit levels described in the assessment model for professional development (see Appendix 4).

ICT & Software Engineering

The exit qualifications of ICT & Software Engineering are related to the domain description of the HBOi-2018 (<http://www.hbo-i.nl/domeinbeschrijving>). This document outlines and details five key ICT competencies. In addition, it outlines and details five ICT fields of activity or professional domains for each competency at three levels of performance indicators. The third and highest level should be regarded as the desired HBO exit level. Given the broad scope of the domains outlined, the programme is unable to achieve the very

highest level in each one of these fields. Instead the highest achieved level is detailed in the table below per competency and field of activity / professional domain.

	Consulting	Analysis	Design	Realisation	Manage & control
User interaction			1	2	
Organisational processes	1	2	2	1	1
Infrastructure	1	1	1	1	
Software	3	3	3	3	3
Hardware interfacing					

In addition, students will be working on professional development. Students shall demonstrate that professional development within the units of study, according to the exit levels described in the assessment model for professional development (see Appendix 4).

ICT & Technology

The exit qualifications of ICT & Technology are related to the domain description of the HBOi-2018 (<http://www.hbo-i.nl/domeinbeschrijving>). This document outlines and details five key ICT competencies. In addition, it outlines and details five ICT fields of activity or professional domains for each competency at three levels of performance indicators. The third and highest level should be regarded as the desired HBO exit level. Given the broad scope of the domains outlined, the programme is unable to achieve the very highest level in each one of these fields. Instead the highest achieved level is detailed in the table below per competency and field of activity / professional domain.

	Consulting	Analysis	Design	Realisation	Manage & control
User interaction					
Organisational processes					
Infrastructure			1	1	
Software	2	2	3	3	3
Hardware interfacing	3	3	3	3	3

In addition, students will be working on professional development. Students shall demonstrate that professional development within the units of study, according to the exit levels described in the assessment model for professional development (see Appendix 4).

Appendix 2 Minor regulations of the programme minors

1. Name of minor: Specialisations in ICT & Cyber Security (minor Specialisations in ICS)

2. English name: Specialisations in ICT & Cyber Security

3. Content of minor

Students will learn how to set up and implement ICT and cyber security-related analyses and developments. The specialisation shall deal with security incident response with problem analysis and forensic research and the development of environments, systems or software that provide security functionality. ICT development in this case refers to building ICT infrastructures and the functional and technical development thereof, with focus on non-functional aspects such as performance, security, compliance, and controllability.

Summary for diploma supplement

The name of the minor and the corresponding number of credits shall be included on the diploma supplement. Students shall receive a certificate for the minor upon completion with a positive assessment. The following summary shall be included:

The ICT Cyber Security minor shall focus on the subject of technological ICT security with attention to relevant non-technical aspects. Including:

- Following and researching ICT security-related trends and hypes.
- Setting up security monitoring and incident response.
- Development of an ICT infrastructure.
- Taking into account ethical, legal and technological frameworks.

4. Overview of educational activities of the minor (see Article 16, general section TER)

The FHICT programme guide provides an outline of the educational activities. This document is available on the [intranet](#).

5. Enrolment for educational activities of the minor

Students shall discuss the minor they intend to follow with the study career counsellor. Students must enrol via ProgressWWW.

6. Minor testing and enrolment for testing (Article 18 and Article 22, general section TER)

The programme guide outlines the testing and assessment. This document is available on the [intranet](#).

7. Completion of the minor (see Article 19, paragraph 3, general section TER)

Students will be creating professional products, which will be assessed. The programme guide provides an outline of the completion criteria of the professional products and of the overall assessment. The assessment scale is U/ S/ G/ O.

8. Examination Board

The Specialisations Examinations Division of the FH ICT Examination Board shall be authorised to consider applications from students with regard to the assessment or testing of the minor. The names of the members of the Examinations Division are available in the Appendix of the TER [Composition of the Examination Board](#).

9. Validity

This information shall be valid for the 2019-2020 academic year.

10. Admission requirements minor

- Admission to the examination phase of the post-foundation year phase.
- At least 1 of the ICS-A and ICS-B specialisation components has been passed.

11. Not accessible to:

Students who do not meet the admission requirements (see paragraph 10).

No further requirements shall apply to students in relation to participation and completion of the minor other than those stated in these minor regulations.

1. Name of minor: Specialisations in ICT & Education (minor Specialisations in EDU)

2. English name: Specialisations in ICT & Education

3. Content of minor

This (teaching period) minor will see the student grow from a student who is able to provide ICT education under supervision to an independent teacher by way of workplace learning. During this teaching period, testing and assessment, and the integration thereof, will play a key role in the contact sessions. In addition, the student will be taking an in-depth look at the educational concepts that are used, on the basis of didactic and pedagogical principles, and he will be developing his own views on those subjects. As a teacher in ICT education, it is key that the student should develop his researching skills. In order to develop that aspect, the student will conduct field research, which will include developing and improving an educational component. The student will substantiate that product and evaluate the effects thereof. Finally, the student will be summarising his competency development in a reflection on the professional identity he has developed as a teacher within the ICT field.

Students shall receive a certificate for the minor upon completion with a positive assessment. The name of the minor and the corresponding number of credits shall be included on the diploma supplement. The 'Minor Specialisations in ICT & Education' will see the student grow from a student who is able to provide ICT education under supervision to an independent teacher. The focus in the minor will be on testing and assessment, the student's own views on educational concepts, and on research skills as a teacher. A summarising reflection will be used to provide the student with a professional perspective as a teacher in ICT education.

4. Overview of educational activities of the minor (see Article 16, general section TER)

The programme guide of the minor provides an outline of the educational activities.

5. Enrolment for educational activities of the minor

Students shall discuss the minor they intend to follow with the study career counsellor. Students must enrol via ProgressWWW.

6. Minor testing and enrolment for testing (Article 18 and Article 22, general section TER)

The programme guide outlines the testing and assessment.

7. Completion of the minor (see Article 19, paragraph 3, general section TER)

Students will be creating professional products, which will be assessed. The programme guide provides an outline of the completion criteria of the professional products and of the overall assessment. The assessment scale is U/ S/ G/ O.

8. Examination Board

The Examination Board of Business Management Education and Technology ED shall be authorised to consider applications from students with regard to the assessment or testing of the minor. The names of the members of that Examination Board are available in the TER of the LBT programme.

9. Validity

This information shall be valid for the 2019-2020 academic year.

10. Admission requirements minor

- Admission to the examination phase of the post-foundation year phase.
- At least 1 of the EDU-A or EDU-B specialisation components has been passed.
- Grade of 6 or above for the EDU internship.
- Positive recommendation from teaching team end of ICT & EDU semester 4.

11. Not accessible to:

Students who do not meet the admission requirements (see paragraph 10).

No further requirements shall apply to students in relation to participation and completion of the minor other than those stated in these minor regulations.

1. Name of minor: Specialisations in ICT & Game Design and Technology (minor Specialisations in GDT)

2. English name: Specialisations in ICT & Game Design and Technology

3. Content of minor

In this teaching period minor, students will be working in interdisciplinary teams to research and develop games for entertainment and educational purposes. In addition to research and development, the following aspects will be covered: Principles of game development (Game Basics), Artificial Intelligence, Level Design, and the application of the production environments common in the industry. In addition, the minor will study current themes within the games industry. Furthermore, links will be made to the research being conducted by the Serious Game Design chair. Students shall carry out project assignments in a workplace setting in order to ensure solid preparation for professional practice.

Students will demonstrate their skills by way of focus group and platform research, concept development, functional design, and the realisation of games. Students will gain knowledge of game design theory and the position of games in society. Students will make use of an Agile development method in which user testing plays a key role, with an ethical attitude expected from the student. An inquisitive and pro-active attitude will be expected from students in order to achieve the above.

Summary for diploma supplement

Students shall receive a certificate for the minor upon completion with a positive assessment. The name of the minor and the corresponding number of credits shall be included on the diploma supplement. In the 'Minor Specialisations in ICT & Game Design and Technology', the student will have gained knowledge on the development and realisation of video games for entertainment and educational purposes. By working in an interdisciplinary team, students will have conducted research independently and realised their assignments. Within the process, students will have used common production tools used in the games industry. In this way, students will be prepared for a profession in the games industry.

4. Overview of educational activities of the minor (see Article 16, general section TER)

The programme guide provides an outline of the educational activities. This document is available on the [intranet](#).

5. Enrolment for educational activities of the minor

Students shall discuss the minor they intend to follow with the study career counsellor. Students must enrol via ProgressWWW.

6. Minor testing and enrolment for testing (Article 18 and Article 22, general section TER)

The programme guide outlines the testing and assessment. This document is available on the [intranet](#).

7. Completion of the minor (see Article 19, paragraph 3, general section TER)

Students will be creating professional products, which will be assessed. The programme guide provides an outline of the completion criteria of the professional products and of the overall assessment. The assessment scale is U/ S/ G/ O.

8. Examination Board

The Specialisations Examinations Division of the FH ICT Examination Board shall be authorised to consider applications from students with regard to the assessment or testing of the minor. The names of the members of the Examinations Division are available in the Appendix of the TER [Composition of the Examination Board](#).

9. Validity

This information shall be valid for the 2019-2020 academic year.

10. Admission requirements minor

- Admission to the examination phase of the post-foundation year phase.
- At least 1 of the GDT-A or GDT-B specialisation components has been passed.

11. Not accessible to:

Students who do not meet the admission requirements (see paragraph 10).

No further requirements shall apply to students in relation to participation and completion of the minor other than those stated in these minor regulations.

1. Name of minor: Specialisations in ICT & Management and Security (minor Specialisations in MS)

2. English name: Specialisations in ICT & Management and Security

3. Content of minor

Students will learn how to integrate ICT-related innovations in new or existing ICT service management organisations. This includes studying and following trends and hypes, selecting innovations with market potential and showcasing a new ICT product via a prototyping process. Integrating innovation in a service organisation consists of thinking about new, suitable service models and organisation within a changing environment. These are subsequently to be implemented in an operational ICT service management organisation. ICT development in this case refers to building ICT architecture and the functional and technical development thereof, with a focus on non-functional aspects such as performance, security, compliance, and controllability.

Summary for diploma supplement

The name of the minor and the corresponding number of credits shall be included on the diploma supplement.

Students shall receive a certificate for the minor upon completion with a positive assessment. The following summary shall be included:

The ICT Management and Security minor will focus on ICT service innovation and processing ICT innovations into an existing ICT service organisation.

Including:

- Following and researching ICT-related trends and hypes.
- Selecting innovations in order to offer them as a product or service.
- Carrying out a prototyping process.
- Setting up suitable service management models in a changing environment.
- Building an ICT architecture and developing an ICT environment.
- Setting up an ICT service management organisation.
- Taking into account ethical, legal, technological and social frameworks.

4. Overview of educational activities of the minor (see Article 16)

The programme guide provides an outline of the educational activities. This document is available on the [intranet](#).

5. Enrolment for educational activities of the minor

Students shall discuss the minor they intend to follow with the study career counsellor. Students must enrol via ProgressWWW.

6. Minor testing and enrolment for testing (Article 18 and Article 22 TER)

The programme guide outlines the testing and assessment. This document is available on the [intranet](#).

7. Completion of the minor (see Article 19, paragraph 3)

Students will be creating professional products, which will be assessed. The programme guide provides an outline of the completion criteria of the professional products and of the overall assessment. The assessment scale is U/ S/ G/ O.

8. Examination Board

The Specialisations Examinations Division of the FH ICT Examination Board shall be authorised to consider applications from students with regard to the assessment or testing of the minor. The names of the members of the Examinations Division are available in the Appendix of the TER [Composition of the Examination Board](#).

9. Validity

This information shall be valid for the 2019-2020 academic year.

10. Admission requirements minor

- Admission to the examination phase of the post-foundation year phase.
- At least 1 of the MS-A and MS-B specialisation components has been passed.

11. Not accessible to:

Students who do not meet the admission requirements (see paragraph 10).

No further requirements shall apply to students in relation to participation and completion of the minor other than those stated in these minor regulations.

1. Name of minor: Specialisations in ICT & Smart Mobile (minor Specialisations in SM)

2. English name: Specialisations in ICT & Smart Mobile

3. Content of minor

The Smart Mobile teaching period minor will focus on the development of mobile applications (apps) for tablets and smartphones. The minor will focus especially on the major players on the market (very changeable). Currently, Android owned by Google (primarily Java-based) and iOS owned by Apple (Xcode with objective C). The minor will also look at the generators of Apps for these platforms (e.g. Google's app inventor). Students will learn how to programme and develop apps using these platforms using the corresponding SDKs. A crucial aspect in this regard is that the style guides be followed accurately; this applies to Apple in particular, with apps that do not meet the requirements of the style guide being rejected by the Appstore.

Before an app can be realised, however, it must be invented. Concepting within the framework of the style guides is an absolute must, so too is the developing of interaction and interfaces within the constraints of the limited screen real estate of smartphones and tablets. It is primarily the aspect of how users use and experience it that can make or break an app. Cognitive psychology and interaction design is crucial in that regard.

Explicit attention will be paid to concept development and futurology in order to create solid concepts. Students will learn how to think outside of existing frameworks and use that skill to their advantage when developing concepts.

In the end, the product that has been developed must also be a viable business concept. Developing a business case for the developed apps shall also be part of the final products.

Summary for diploma supplement

The name of the minor and the corresponding number of credits shall be included on the diploma supplement.

Students shall receive a certificate for the minor upon completion with a positive assessment. The following summary shall be included:

The minor ICT & Smart Mobile minor will teach students how to develop apps for the two main mobile platforms of the moment, e.g. Android and iOS. The programme will focus explicitly on working and creating concepts within the style guides of the respective platforms in which user experience plays a pivotal role. In addition, students will be required to prepare a business case for the apps they realise.

4. Overview of educational activities of the minor (see Article 16)

The programme guide provides an outline of the educational activities. This document is available on the [intranet](#).

5. Enrolment for educational activities of the minor

Students shall discuss the minor they intend to follow with the study career counsellor. Students must enrol via ProgressWWW.

6. Minor testing and enrolment for testing (Article 18 and Article 22)

The programme guide outlines the testing and assessment. This document is available on the [intranet](#).

7. Completion of the minor (see Article 19, paragraph 3)

Students will be creating professional products, which will be assessed. The programme guide provides an outline of the completion criteria of the professional products and of the overall assessment. The assessment scale is U/ S/ G/ O.

8. Examination Board

The Specialisations Examinations Division of the FH ICT Examination Board shall be authorised to consider applications from students with regard to the assessment or testing of the minor. The names of the members of the Examinations Division are available in the Appendix of the TER [Composition of the Examination Board](#).

9. Validity

This information shall be valid for the 2019-2020 academic year.

10. Admission requirements minor

- Admission to the examination phase of the post-foundation year phase.
- At least 1 of the SM-A or SM-B specialisation components has been passed.

11. Not accessible to:

Students who do not meet the admission requirements (see paragraph 10).

No further requirements shall apply to students in relation to participation and completion of the minor other than those stated in these minor regulations.

1. Name of minor: Applied Data Science (minor ADS)

2. English name: Applied Data Science

3. Content of minor

Never before has data been available in such variety, in such quantities and at such high speeds. Big Data provides us with an opportunity to get answers to questions that previously could not even have been asked. But how does one analyse large quantities of data that are constantly changing? A world of new possibilities lies beyond the horizon of the technological hurdles. In this world, accurate data analysis is able to affect human behaviour, which may be invaluable information to companies, hospitals, governments and other organisations. For that reason, demand for good data analysts has increased exponentially. Given that Big Data analysis is a relatively new phenomenon, legislation is often one step behind the facts. In addition to technical skills, a good data analyst must also have a feel for the human dimension of the job. How far can we take data analysis without violating the boundaries of ethics or those of the law?

The 'Applied Data Science' minor prepares students to face such problems by offering courses in the field of storage and processing large quantities of data, data analysis using Machine Learning algorithms visualising and reporting results, as well as ethics and law. In addition, students will be working on a current Big Data issue in groups during the professional task, which uses authentic data of an organisation. Within the task, students will go through the entire chain from storage to a working prototype.

Summary for diploma supplement

The name of the minor and the corresponding number of credits shall be included on the diploma supplement. Students shall receive a certificate for the minor upon completion with a positive assessment. The following summary shall be included:

In the English-language 'Applied Data Science' minor, students shall have gained knowledge and skills of the current state of affairs of Big Data infrastructure, Machine Learning, data visualisation and reporting, Social Physics, corresponding legislation and ethical considerations. Students will have applied that knowledge on current and authentic data sets in a group context during the professional task.

4. Overview of educational activities of the minor (see Article 16)

The programme guide provides an outline of the educational activities. This document is available on the [intranet](#).

5. Enrolment for educational activities of the minor

Students shall discuss the minor they intend to follow with the study career counsellor. Students must enrol via ProgressWWW.

6. Minor testing and enrolment for testing (Article 18 and Article 22)

The programme guide outlines the testing and assessment. This document is available on the [intranet](#).

7. Completion of the minor (see Article 19, paragraph 3)

Students will be creating professional products, which will be assessed. The programme guide provides an outline of the completion criteria of the professional products and of the overall assessment. The assessment scale is U/ S/ G/ O.

8. Examination Board

The ICT & Software Engineering examinations division of the FH ICT Examination Board shall be authorised to consider applications from students with regard to the assessment or testing of the minor. The names of the members of the Examinations Division are available in the Appendix of the TER [Composition of the Examination Board](#).

9. Validity

This information shall be valid for the 2019-2020 academic year.

10. Admission requirements minor

- Admission to the examination phase of the post-foundation year phase.
- At least 1 of the ADS-A or ADS-B specialisation components has been passed.

11. Not accessible to:

Students who do not meet the admission requirements (see paragraph 10).

No further requirements shall apply to students in relation to participation and completion of the minor other than those stated in these minor regulations.

1. Name of minor: Embedded Systems (minor ES)

2. English name: Embedded Systems

3. Content of minor

The Embedded Systems domain relates to building intelligence into products which we do not regard as computers. Embedded systems allow use to build 'Smart Devices', such as smart cars, medical robots, robotic lawnmowers, intelligent household appliances, intelligent toys, etc. The embedded system is the brain of the relevant product, which uses sensors to scan the environment and actuators to affect the environment.

The minor centres on the themes of Sensing & Vision (sensing the world), Embedded control & Robotics (intelligent behaviour) and Connectivity (shared knowledge & collaboration). In terms of content, the minor makes no distinction in terms of specialisation. Advanced Embedded Systems is intended for students following the ICT & Technology specialisation. Essential Embedded Systems is for students following a different specialisation within ICT.

Summary for diploma supplement

The name of the minor and the corresponding number of credits shall be included on the diploma supplement.

Students shall receive a certificate for the minor upon completion with a positive assessment. The following summary shall be included:

Advanced Embedded Systems:

In this minor, the student shall have gained knowledge and skills in the field of vision, robotics, and connectivity. As regards knowledge depth, the minor builds on the second-year ICT & Technology curriculum.

Essential Embedded Systems:

In this minor, students shall have gained knowledge and skills in the field of sensing, embedded control and connectivity. As regards knowledge depth, the minor is comparable to the second-year ICT & Technology curriculum.

4. Overview of educational activities of the minor (see Article 16)

The programme guide provides an outline of the educational activities. This document is available on the [intranet](#).

5. Enrolment for educational activities of the minor

Students shall discuss the minor they intend to follow with the study career counsellor. Students must enrol via ProgressWWW.

6. Minor testing and enrolment for testing (Article 18 and Article 22)

The programme guide outlines the testing and assessment. This document is available on the [intranet](#).

7. Completion of the minor (see Article 19, paragraph 3)

Students will be creating professional products, which will be assessed. The programme guide provides an outline of the completion criteria of the professional products and of the overall assessment. The assessment scale is U/ S/ G/ O.

8. Examination Board

The ICT & Technology examinations division of the FH ICT Examination Board shall be authorised to consider applications from students with regard to the assessment or testing of the minor. The names of the members of the Examinations Division are available in the Appendix of the TER [Composition of the Examination Board](#).

9. Validity

This information shall be valid for the 2019-2020 academic year.

10. Admission requirements minor

- Admission to the examination phase of the post-foundation year phase.

11. Not accessible to:

Students who do not meet the admission requirements (see paragraph 10).

No further requirements shall apply to students in relation to participation and completion of the minor other than those stated in these minor regulations.

1. Name of minor: Virtual Reality

2. English name: Virtual Reality

3. Content of minor

This teaching period minor will enable all the students of the broad FHICT bachelor to take an in-depth look at the broad ICT field of virtual reality.

Rather than a single technology, Virtual reality (VR) is a collection of quickly-developing technologies. Most virtual reality systems make use of 3D computer graphics, real-time simulation techniques and a wide range of input and output equipment that create the illusion of being in a virtual environment.

For a number of people from the VR domain, VR is best defined by the experience of 'being there' in a virtual environment, or the 'presence' effect. This VR environment may be the cockpit of an F16, the surface of a gold atom, a future building or the inside of a coronary artery. The areas of application are many, and include:

- Visualisation of complex data and models (medical, chemical, data)
- Entertainment (amusement parks, games)
- Training (use of equipment, incident training)
- Modelling & Design (art, 3D painting, design)
- Therapy (phobias, fears)
- Architecture (buildings, interior, landscapes)

In order to create a virtual world, various aspects need to be taken into account. These include:

- How is the user monitored? (Tracking)
- How does the user interact with the world? (navigation, orientation, selection, manipulation)
- Which senses of the user will be involved? (visual, auditory and haptic sensors)

Over the course of the first 8 weeks, students shall gain extensive knowledge on all these subjects, and acquire the skills to apply the programming and modelling techniques and use the hardware from a practical point of view. This period shall be concluded with an individual project in which these skills have to be demonstrated.

In the professional task that will follow, students shall – as part of a multidisciplinary team and with the aid of a client – design and realise a VR system, according to a methodology that shall have to be put into practice. In tandem with the project, less technical and more people-oriented VR courses will be followed.

The basic courses (3D programming, 3D modelling, VR systems and VR devices) will be taken in blocks (days). These blocks will start with a lecture, after which the techniques/tools discussed will be practiced through a practical assignment. For the follow-up courses (Human VR experience, Human Interaction design), students shall choose from the broad VR domain based on their own interests, and the competencies shall be acquired by means of prototyping and research.

Through capita selecta and project assignments in collaboration with companies, students shall learn about the state-of-the-art techniques used in this field.

This minor will be completely in English.

Summary for diploma supplement

The name of the minor and the corresponding number of credits per module shall be stated in the diploma supplement. Students shall receive a certificate for the minor upon completion with a positive assessment.

The following summary shall be included:

In the English-language minor 'Virtual reality', students have gained knowledge and skills of 3D programming, 3D modelling, Immersive Virtual Environments, Virtual Reality devices, Human VR experience and Human Interaction Design. Through capita selecta and project assignments, students have become familiar with state-of-the-art techniques in this field. The professional task involved designing and realising a VR system as part of a multidisciplinary team, according to a methodology that is used in practice.

4. Overview of educational activities of the minor (see Article 16)

The programme guide provides an outline of the educational activities. This document is available on the [intranet](#).

5. Enrolment for educational activities of the minor

Students shall discuss the minor they intend to follow with the study career counsellor. Students must enrol via ProgressWWW.

6. Minor testing and enrolment for testing (Article 18 and Article 22)

The programme guide outlines the testing and assessment. This document is available on the [intranet](#).

7. Completion of the minor (see Article 19, paragraph 3)

Students will be creating professional products, which will be assessed. The programme guide provides an outline of the completion criteria of the professional products and of the overall assessment. The assessment scale is U/ S/ G/ O.

8. Examination Board

The ICT & Software Engineering examinations division of the FH ICT Examination Board shall be authorised to consider applications from students with regard to the assessment or testing of the minor. The names of the members of the Examinations Division are available in the Appendix of the TER [Composition of the Examination Board](#).

9. Validity

This information shall be valid for the 2019-2020 academic year.

10. Admission requirements minor

- Admission to the examination phase of the post-foundation year phase.

11. Not accessible to:

Students who do not meet the admission requirements (see paragraph 10).

No further requirements shall apply to students in relation to participation and completion of the minor other than those stated in these minor regulations.

1. Name of minor: Global Acting in ICT

2. English name: Global Acting in ICT

3. Content of minor

The objective of the minor 'Global Acting in ICT' is to combine international IT aspects and trends with intercultural aspects. To that end, students visit multiple universities abroad. The focus of the minor is on intercultural and international competencies and global citizenship. This is applied and experienced in an IT-setting with an innovation project in which current trends are studied and applied.

Summary for diploma supplement

The name of the minor and the corresponding number of credits shall be included on the diploma supplement. Students shall receive a certificate for the minor upon completion with a positive assessment.

The following summary shall be included:

Global Acting in ICT:

In the minor 'Global Acting in ICT', international IT aspects and intercultural aspects in general are studied and experimentally experienced in an international setting. Collaboration with and visits to various international universities is part of the programme.

4. Overview of educational activities of the minor (see Article 16)

The minor consists of 6 modules: a start-up module and 5 modules provided by the 5 participating universities and universities of applied sciences. The first modules contain intercultural and internationalisation aspects and training and the planning of an international project. The modules focus on a trend in IT, such as: AI, Cyber Security, Data science, Mobile systems in Health, User Experience Design. These trends are studied and applied in an innovative project. Students choose to go to 2 or more locations abroad to follow the modules and, in doing so, experience international and intercultural aspects. The other modules are followed remotely from the student's own study programme in a virtual classroom and learning environment.

Students may have prior knowledge of one or two of the IT themes in the modules. In such case, the international setting in which the themes are covered provide broader knowledge and experience of the relevant theme.

5. Enrolment for educational activities of the minor

Students shall discuss the minor they intend to follow with the study career counsellor. Students must enrol via ProgressWWW.

6. Minor testing and enrolment for testing (Article 18 and Article 22)

The programme guide outlines the testing and assessment. This document is available on the [intranet](#). Every module is assessed by the implementing partner university.

7. Completion of the minor (see Article 19, paragraph 3)

Students shall be assessed on professional products and on learning assignments. The programme guide provides an outline of the completion criteria of the professional products and of the overall assessment. The assessment scale is U/ S/ G/ O.

8. Examination Board

The Specialisations Examinations Division of the FH ICT Examination Board shall be authorised to consider applications from students with regard to the assessment or testing of the minor. The names of the members of the Examinations Division are available in the Appendix of the TER [Composition of the Examination Board](#).

9. Validity

This information shall be valid for the 2019-2020 academic year.

10. Admission requirements minor

- Admission to the examination phase of the post-foundation year phase.

11. Not accessible to:

Students who do not meet the admission requirements (see paragraph 10).

No further requirements shall apply to students in relation to participation and completion of the minor other than those stated in these minor regulations.

Appendix 3 Advancement standards

Throughout a Fontys University of Applied Sciences study, the Examination Board shall at various points make decisions on student's study pathway. Below is an overview of each of these advancement points and the consequences of not advancing and which criteria shall be applied at each juncture.

Four-year Bachelor's tracks

S1=semester1, S2=semester2, S3*=semester3 or semester4 (third semester for the student), S4*=semester3 or semester4 (fourth semester for the student), S5=semester5 (internship), S6*=semester6 or semester7 (sixth semester for the student), S7*=semester6 or semester7 (seventh semester for the student), S8=semester8 (graduation project), tailored=tailored track.

Advancement points and consequences:

Advancement point	Advancement to exit	Advancement to	If advancement is not permitted to	Shall cause study delay
D1	S1 (tailored)	S2	S1 (tailored)	1 semester
D2	Foundation year (S2)	Year 2 (S3* / S4*)	S2 (tailored)	1 semester
D3	Year 2 (S3* / S4*)	Internship (S5)	Year 2 (tailored semester)	1 semester
D3*	Year 2 (tailored semester)	Internship (S5)	Year 2 (tailored semester)	1 semester
D3*	Year 2 (tailored semester)	S6* / S7*	S4 *	
D4	Internship (S5)	S6* / S7*	Year 2 (tailored semester and/or internship)	1 or 2 semesters
D5	S6* / S7*	Graduation project (S8)	Tailored S6* / S7*	flexible

Criteria per advancement case:

D1 : S1 → S2

A student may advance to S2 if S1 (tailored) has been passed with a satisfactory grade.

A student may only be admitted to S2 of a certain profile if he has passed S1 with the demonstrated learning outcomes of the same profile.

D2 : S2 → S3*

A student may advance to year 2 (S3*/S4*) if that student has passed the foundation year, provided the profile specialisation is the same as that in S2.

Admission requirement S3* / S4* = foundation year passed

D3 : Year 2 → internship

A year 2-students (S3*/S4*) may do an internship if that student has passed S3* in its entirety and after he has followed S4*, or if the student has been in year 2 for a year and a half already, and has completed both a specialisation component and a profile component.

D3*: Year 2 (tailored semester) → internship

A year 2-student (tailored semester) may do an internship if he has passed either S3* or S4*.

D3*: Year 2 (tailored semester) → S6* / S7*

A year 2-student (tailored semester) may advance to S6* / S7* if he has passed the core phase successfully.

D4 : Internship → S6* / S7*

A student may advance to semester 6 / semester 7 (S6* / S7*) if he has passed the core phase successfully.

D5 : Semester 6/7 → graduation

A student may graduate if S6* and S7* have been passed successfully.

ICT & Software Engineering internship Short-Track

Students transferring in September will follow the following units of study in their respective semesters:

Semester	Units of study	Total study load
Semester 1	Semester 2 ICT & Software Engineering: Basic Software Engineering AS2: Academic preparation and selection	38
Semester 2	Semester 3 ICT & Software Engineering: Distributed Software Engineering AS3: Preparation for pre-master A	37
Semester 3	Semester 4 ICT & Software Engineering: Agile Software Engineering in Enterprises ICT & Software Engineering internship Short-Track	37
Semester 4	ICT & Software Engineering examination phase profile: Enterprise Software Engineering AS6: Preparation for pre-master B	38
Semester 5 and Semester 6	Minor, being a pre-master at TU/e ICT & Software Engineering graduation project	60

Students transferring in February will follow the following units of study in their respective semesters:

Semester	Units of study	Total study load
Semester 1	Semester 2 ICT & Software Engineering: Basic Software Engineering AS2: Academic preparation and selection	38
Semester 2	Semester 3 ICT & Software Engineering: Distributed Software Engineering AS3: Preparation for pre-master A	37
Semester 3	Semester 4 ICT & Software Engineering: Agile Software Engineering in Enterprises ICT & Software Engineering internship Short-Track	37
Semester 4 and Semester 5	ICT & Software Engineering examination phase profile: Enterprise Software Engineering AS6: Preparation for pre-master B Minor, being a pre-master at TU/e	68
Semester 6	ICT & Software Engineering graduation project	30

Students who have failed an AS2 or AS3 unit of study can continue their studies in the four-year bachelor's programme of ICT & Software Engineering. Other units of study that they have not passed shall have to be followed again or be completed in a tailored programme. Units of study from a four-year programme that have been passed in an accelerated programme shall be retained in the event of a transfer.

Once a student has gone through Semester 3 once, units of study that he has not passed shall have to be followed again or be completed in a tailored programme.

Appendix 4 Criteria for Professional Development

Dublin descriptor Assessment dimension	Note	3	2	1
Analysis	<i>Student is able to collect and interpret relevant data (primarily in the field) with the aim of assessing and forming an opinion that is partly based on the weighing of relevant social, international, scientific and ethical aspects and uses this to demonstrate a scientific research attitude.</i>	<ol style="list-style-type: none"> 1. Able to formulate appropriate research questions and secondary questions based on an unstructured practical issue, for all phases of design-oriented / practice-oriented research. 2. Able to independently design research methodology and independently set up research methods, carry them out and substantiate them with reference to research strategies and is able to demonstrate the soundness of his research. 3. Able to consider social, international, scientific and ethical aspects in his analysis. 	<ol style="list-style-type: none"> 1. Able to formulate appropriate research questions and secondary questions. 2. Able to implement the appropriate research strategies and techniques in the correct manner. 3. Able to substantiate his own work with regard to method and content with the research cycle. 4. Able to set up and carry out a research methodology, with the chosen methods forming a research pattern. 	<ol style="list-style-type: none"> 1. Able to demonstrate that information must be retrieved and selected in order to reach and answer and/or conclusion in relation to specific questions. 2. Is able, in carrying out an assignment, to demonstrate that he is able to recognise research strategies and techniques and account for their purpose.
Communication	<i>Student is able to communicate information, ideas, and solutions to an audience consisting of specialists or non-specialists, is able to collaborate and demonstrates (inter-) cultural awareness.</i>	<ol style="list-style-type: none"> 1. Able to account for and defend the execution of a comprehensive professional assignment carried out in a realistic context, both orally and in writing, and is able to adapt the writing style to the intended audience either in Dutch or in English. 2. Able to work effectively in a team in the independent execution of a professional assignment. 3. Able to function and work well in an international or 	<ol style="list-style-type: none"> 1. Able to report on a practical assignment both verbally and in writing, expressing himself in a cogent, structured text with clear argumentation of the various positions. 2. Able to work effectively alongside other student peers, teachers and professionals in a company or institution. 	<ol style="list-style-type: none"> 1. Able to report on an assignment carried out within the university in a correct and appropriate manner. 2. Able to conduct a presentation on an assignment within the university in a clear and persuasive manner. 3. Able to work effectively alongside and with other students within the university.

Dublin descriptor Assessment dimension	Note	3	2	1
		intercultural environment, both inside and/or outside the university of applied sciences.		
Learning skills	<i>Student possesses the learning skills required in order to undertake a subsequent study that assumes a high degree of autonomy, and is enterprising.</i>	<ol style="list-style-type: none"> 1. Able to describe his professional talents and development ambitions in relation to the ICT profession. 2. Able to reflect and receive feedback on his own performance in the ICT profession. 3. Takes initiative, has an independent attitude and is able to work independently and in a result-oriented manner on professional assignments outside of school. 	<ol style="list-style-type: none"> 1. Able to describe his professional talents and development ambitions in relation to the field of ICT. 2. Able to reflect and receive feedback based on his own performance in the field of ICT. 3. Takes initiative, has an independent attitude and is able to work independently and in a result-oriented manner on an assigned task outside of the university. 	<ol style="list-style-type: none"> 1. Able to look back, look forward and describe his professional talents and development ambitions in relation to the ICT study program. 2. Is open to feedback on their own functioning during the study program. 3. Takes initiative and is able to work in a result-oriented manner on a group assignment within the university.

The examination phase criteria are the final qualifications for professional development of the study programme.
The assessment is sufficient if all assessment dimensions have been passed.

B - Study programme setup and support facilities

1. Setup, organisation and provision of education

For information and the setup, the organisation and the provision of the education, please see the following sources:

- *the study programme intranet*
- the Teaching and Examination Regulations (see under A).

2. Student facilities

For more information on student facilities, please consult the following sources:

- the institution component of the Fontys Students' Charter
- the Fontys Helpt website
- the Fontys Study Abroad website
- *the study programme intranet*

3. Academic counselling

For more information on academic counselling, please consult the following sources:

- the Teaching and Examination Regulations (see under A.)
- *the study programme intranet*

C - Internal complaints procedure

Any complaints may be submitted via the following link:

<https://portal.fhict.nl/Kwaliteit/SitePages/Klachten%20en%20ideeen.aspx>