



# Handbook Internship

CU75033/CU75034/CU75035 for

# HBO-ICT

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# 1 Introduction

In the third year of the HBO-ICT study programme, you will do a six-month internship. You will apply the knowledge and skills you have learned in your study programme to professional practice. You will learn a lot: both in terms of content and about yourself. Everything you need to know about the internship can be found in this handbook. We wish you a lot of fun and success!

## 1.1 Objective

During the HBO-ICT programme internship (CU75033/CU75034/CU75035), you will learn to operate professionally in a commercial, ICT-related environment. You will achieve this objective by choosing competences and working on these throughout your internship and providing evidence that is in line with the respective learning objectives. In addition, Professional Skills play a major role in the internship and you will have to be able to demonstrate that you, as a student, can position yourself in a professional context at a higher vocational education level during your internship.

### 1.1.1 Software engineering (CU75033)

As a software engineer, you will be working in a software development environment as part of your internship. You will be responsible for gaining a good understanding of your product's requirements in view of the context, in terms of functional, technical and quality requirements. You will align the development of the product to the company's working method and show that you are able to manage your own progress and communicate appropriately with those involved.

### 1.1.2 Data Science (CU75034)

As a data scientist, you will ensure that you gain a clear insight into the data science related issue that is current within the internship company. You will apply your knowledge of CRISP-DM and demonstrate your ability to ask the right questions, both of those involved and of yourself. You will gain a systematic overview of the current situation and provide appropriate advice on how to improve the process design.

### 1.1.3 Business IT Consultant (CU75035)

As a business IT consultant, you are the dedicated person who will form the overall picture of one or more IT processes in an organisation. You will communicate with the many different parties involved and be the intermediary between IT and the other domains within an organisation. You will gain a systematic overview of the current situation and provide appropriate advice on how to improve the process organisation.

## 1.2 Interested parties

This handbook has been written primarily for students who will be undertaking an internship. It is also intended for the internship company and (teachers of) the HBO-ICT programme. Each of these stakeholders has its own objectives:

- **The internship company** makes an internship position available and offers one or more assignments appropriate to the internship track.
- **The HBO-ICT** programme of the HZ assesses whether you have demonstrated your development on a professional and personal level. It is therefore essential that the requirements and preconditions in this handbook are met.
- **You: the student** who will be completing the internship. You will be operating at the centre of the aforementioned parties as well as your personal interests and development, so that you may successfully complete the internship.

### **1.3 Reading guide**

The remainder of this handbook outlines the admission procedure for the internship, the requirements for an internship and the preparation procedure. It also sets out the framework in which you will draw up your Action Plan and portfolio. This is followed by expectations, tasks, roles and responsibilities that will be set for you as the student but also for the other parties involved. Finally, you will find information about the assessments and scheduling. The appendices contain all the necessary forms for implementation and completion.

## 2 Admission, internship and internship period

In order to be eligible for the internship, both you and your internship company must meet a number of requirements. Requirements are also set in terms of the scope of the internship. These are discussed in this chapter.

### 2.1 Internship acceptance criteria

You can participate in the internship if you have obtained the propaedeutic certificate of the HBO-ICT programme and if you have obtained at least 30 EC in your main phase.

### 2.2 Scope and time recording

The internship takes place in the third year of the study programme. The internship consists of one consecutive period of one semester. Within the HBO-ICT curriculum, the internship amounts to 25 study points (EC).

For the internship, a period of one semester (20 weeks) is available. There are 17 possible internship weeks of 40 hours per week up to the first examination date. Given the study load of 25 EC, the student is expected to devote  $\frac{5}{6} (\frac{25EC}{30EC})$  of this period to the internship. This amounts to the following:

- 17 [weeks] \* 5 [working days] = 85 working days, or
- 85 [working days] \* ( 8 [hours per working day] \*  $\frac{5}{6}$  [study load component internship] ) = 567 hours

You are required to work at least 80% of this time (that is 454 hours) in a business context. The remaining 20% does not have to be done directly at the internship company and can be spent on orientation, preparation, reporting, communication, portfolio, mid-term presentation, internship return day, and so on.

You are required to keep a record of hours worked during the whole period and to account for 567 hours (see [Appendix F - Time recording](#)). You must include *all* hours in your timesheet, including the allotted 20% you do not work at the internship placement. Your supervisor will sign off and approve this timesheet at the end of your internship. This timesheet is evidence for the learning objective professional behaviour. Holidays and sick days do not count as internship days.

### 2.3 Internship requirements

#### 2.3.1 General

A suitable internship placement for the internship must meet the following requirements and preconditions:

- A business mentor with a college or university degree is appointed (demonstrable), preferably within the relevant ICT field.
- An equipped workplace is available to you according to the company's standard operating procedures.
- You are enabled to meet the number of hours in the designated period and to attend other events organised by the programme (such as the return day).
- Based on article 2.2.11 paragraph f of the Implementation regulation HBO-ICT the following applies:

*"If the intern already has or had an economic relationship with the internship provider, additional requirements may be set by the educational institution regarding the business mentoring of the intern."*

This article has been drawn up to ensure that an intern learns to work in an environment that is new and undertakes new content-related work during the internship period.

The additional requirements are determined on a case-by-case basis. Examples of this are:

- Do not do an internship in the same department as the one in which you are (or have been) working).
- Do not perform the same work that you already perform/have performed at the company.
- An organisation that has not yet acted in supervisory capacity for you.

### **2.3.2 Software Engineer track (CU75033)**

The internship is carried out on location within (a department of) an ICT business environment of sufficient complexity, such as an Internet agency or a software development department.

### **2.3.3 Data Science track (CU75034)**

The internship is carried out on location within (a department of) an ICT business environment or domain-specific business environment of sufficient complexity and with access to sufficient data, in which a data science issue plays a role.

### **2.3.4 Business IT Consultant track (CU75035)**

The internship is carried out on location within (a department of) an ICT business environment or domain-specific business environment of sufficient complexity in which among other things, advice is given about (IT) business processes

## **2.4 OnStage job board**

At <https://hz.nl/secure> you will find the internship management system OnStage (see [Appendix G – OnStage Internship management system](#)). It also contains a job board for internships. This provides information on internships and graduation assignments submitted by companies. The internship coordinator checks these assignments for a number of basic requirements and their potential (content and level). This makes it a good starting point when looking for an internship! It is often the case following consultation with the company and on the basis of this handbook, that you will need to refine a number of details.

## **2.5 Internship abroad and internship grants**

If you want to do your internship abroad, there will be additional arrangements that need to be made. A good place to start is the International Office at HZ (see [H10 Contact details HZ](#)). This office will support you in everything related to studying or doing an internship abroad. They will also update you about potential scholarships you may be eligible for. If you are going to do an internship abroad, please discuss the requirements above with the internship coordinator and your internship mentor and if necessary, discuss the alternatives. For that reason, be sure to ask for more information about internships abroad in good time.

### 3 Preparatory procedure

Preparation for the internship is made up of at least the following steps (the participant is shown in bold):

Table 1 Preparatory procedure for an HBO-ICT programme internship

1	Attend internship briefing by TWZ/Internship Office	<b>student</b>
2	Register on Learn and OnStage for the HBO-ICT programme internship	<b>student</b>
3	Identifying and securing an internship placement	<b>student</b>
4	Formulate Internship Start Document (see <a href="#">Appendix C – HBO-ICT Start document</a> )	<b>student</b>
5	Submit Start document with list of grades via OnStage	<b>student</b>
6	Approve Start Document (provided that you agree, otherwise feedback and go to step 5)	<b>internship coordinator</b>
7	Assign supervisor to student	<b>internship coordinator</b>
8	Draw up an internship agreement and send it to the student (provided that the accompanying approved Start Document is in place)	<b>internship office</b>
9	Sign internship agreement (or have it signed) and return it	<b>student</b>

#### 3.1 Start document

A prerequisite for starting the internship is an approved start document. This is a document of two to three A4 pages in which you include all necessary information and check the prerequisites. The start document is your internship proposal in which you make a convincing case for the internship you want to undertake. It will include, in an attached appendix, a baseline measurement completed by yourself for the learning objective professional behaviour (see [§4.1](#) and [Appendix C](#)).

You must sign the start document yourself after which you upload it to OnStage. The internship coordinator will assess the completed start document and will approve the document when it is submitted to the (content) assigned internship mentor for approval. The start document will therefore increase your chances of getting a valid internship and as such a successful internship (see [Appendix C – HBO-ICT Start document](#)).

This start document must be submitted no later than 1 week after the start of the internship. A potential second submission can be made after 2 weeks. After the 4th week following the start of the internship, start documents will no longer be approved and the internship will have to be postponed.

#### 3.2 Internship agreement

Based on the documents and information you provide in OnStage and the approval thereof by the internship coordinator, the internship agreement is drawn up by the internship office. The internship office will then send you the agreement. Check this document thoroughly for any inaccuracies (also check against the details as provided in the internship handbook applicable to you). You will ask your business mentor to sign this document on behalf of the internship company, you then sign it yourself and return it. Finally, the HZ also signs it.

#### 3.3 Optional: company internship agreement

Some companies also use their own internship agreement/contract, in addition to the internship agreement set out by the HZ. If this is the case for you, you must submit this company internship agreement via OnStage to the internship office. The internship office will check whether the company agreement and the HZ internship agreement do not include any inconsistencies. Once everything is agreed, the internship office will have the company agreement signed by the programme's internship coordinator, after which it will be returned to you or your internship company.



### **3.4 Learn**

On the online learning platform Learn ([learn.hz.nl](https://learn.hz.nl)), an environment is set up for the internship, which includes the handbook and all sorts of additional information and tips. Communication from the study programme about the internship also takes place via Learn. Therefore, please register on [Learn.hz.nl](https://learn.hz.nl) for the internship course unit for your academic year. The course is called "HBO-ICT Internship (25EC) (MWST, CU75033/CU75034/CU75035, [Academic year])". You can enrol yourself onto the course.

## 4 Learning objectives

Professional Skills in the Internship aims to teach the student to operate professionally in a commercial, ICT environment. The student achieves this by, among other things, reflecting on his/her own performance.

In order to achieve the set objective of the internship (see [§1.1](#)) the following is expected of you:

1. You can demonstrate that you are working on the learning objectives set:
  - a. An objective set by the study programme: learning to operate professionally (see [§4.1](#)).
  - b. The four previously defined learning objectives (see [§4.2](#)).
2. You draw up an Action Plan during the first weeks of the internship, detailing the learning objectives for the internship and how you are going to achieve them (see [§5.1](#)).
3. You create and maintain a portfolio. The portfolio should contain self-assessments, evidence, timesheets and other internship-related matters (see [§5.2](#)).

In other words, you will work on the learning objectives during your internship, one of which will be imposed by the study programme on all internship variants: learning professional skills.

### 4.1 Learning objective professional behaviour

For the professional skills in the internship, the main focus is on the aspect of 'Independence' in a more complex context than you are used to. It is up to you to demonstrate that you have a professional work attitude in a work environment and that you can react and act independently within it.

#### 4.1.1 Baseline measurement

Before the start of your internship, you will complete the employer assessment form and you will explain in the *"Minimal two learning goals plus approach what you want to develop during your internship (based on PPD-A portfolio, translated to PPD-C level:"*-section what is handed in for your PPD-assessment in the 2<sup>nd</sup> year. All the learnings you described for the internship should be added here and how you will incorporate these in your internship. Check below the form for the higher level of competent in comparison to the 2<sup>nd</sup> year requests regarding PPD (see [Appendix D – HBO-ICT Form Employer Assessment Internship](#)). Help yourself to create at least two learning goals for the 4<sup>th</sup> year per quadrant.

#### 4.1.2 Employer assessment

Just prior to the company visit halfway through the internship period, your employer assessment form will need to be completed by your business mentor. This will be discussed during the company visit with your supervisor and business mentor and you will fill in a STARRT form (see [Appendix E – Example STARRT Form](#)) for self-assessment, in which you draw a comparison with your baseline measurement. It is the intern's responsibility to plan and organise the company visit, to create an agenda and to prepare a presentation and/or demo. The employer assessment and the company visit will result in action points that you include in your internship portfolio and which you demonstrably work on during the remainder of your internship.

#### 4.1.3 Final assessment

At the end of the internship, you will receive a final employer assessment from your business mentor. Given that the objective of the internship in the HBO-ICT programme is to learn to operate professionally in a commercial, ICT-related environment, the business mentor's view of the intern's performance is included in the final assessment of the internship as advice. The examiner will determine whether the advice will be accepted for the final assessment and the examiner retains the right to deviate from the advice. In the event of any special circumstances, it is the student's responsibility to contact the examiner as soon as possible. Based on the final assessment, you will again perform a self-assessment (using a STARRT form) in which you compare your current progress with your baseline measurement and with the mid-term feedback. From this you draw a conclusion.

## 4.2 Content-related learning objectives

In your Action Plan, you will formulate how you expect to bring the learning objectives to a successful conclusion. Each learning objective is pre-formulated per track, it is important to specify in your Action Plan how you are going to fulfil these learning objectives. All internship competences can be found in [Appendix A](#).

You will further formulate these learning objectives SMART (Glabbeek, 2012 (2nd edition)) in your Action Plan (see [5.1](#)). During the rest of the internship, you will work on the learning objectives and you will collect evidence of the achievement of these objectives. Self-assessments on the basis of STARRT forms ([Appendix E – Example STARRT Form](#)) with accompanying evidence are to be included in your portfolio (see [5.2](#)), based on your reflection of the process you will score yourself per learning outcome in the designated self-assessment form ([Appendix B – Self-assessment Form](#)).

For information about SMART and the STARRT method, see this book (Glabbeek, 2012 (2nd edition)): Successful studying, communication and research - Alphabetical reference work for higher education (2012) by N. van Glabbeek (see also H9). Make a learning objective **Specific**, **Measurable**, **Acceptable**, **Realistic** and **Time-bound**.

### 4.2.1 Software Engineer track (CU75033)

In the Software Engineer internship, you will primarily focus on developing high-quality software that fits the context in which you will be working. A total of four different learning outcomes have been formulated for the Software Engineer work placement:

1. You can make an analysis of a software engineering design problem in a project context.
2. You can select, evaluate (partial), document and communicate solutions for a software engineering design problem in a project context.
3. You realize a suitable solution to a software engineering design problem in a project context
4. You can give a suitable advice for solving a software engineering design problem in a project context.

In addition, there is the option of adding a learning outcome yourself; if you have taken steps that you cannot include within the four learning outcomes, you may add one to increase your score in this area.

### 4.2.2 Data Science track (CU75034)

During the Data Science internship, you will primarily be working on solving a data science problem according to the CRISP-DM methodology. A total of four learning outcomes have been formulated for the Data Science internship:

1. You can set up a data science process in a project context.
2. You can collect and address relevant data in a project context.
3. You can perform data analysis in a project context.
4. You can evaluate and deploy results of a data science process in a project context.

In addition, there is the option of adding a learning outcome yourself; if you have taken steps that you cannot include within the four learning outcomes, you may add one to increase your score in this area.

#### **4.2.3 Business IT Consultant track (CU75035)**

In the Business IT Consultant internship, you will primarily focus on optimising one or more IT processes (depending on the complexity and scope of these processes). There are a total of four internship competencies defined for the BIC internship:

1. You can make a validated current situation analysis (IST) for the ICT provisions
2. You can make a validated and considered (SOLL) process design
3. You can realize an implementation(plan) and test the acceptance
4. You can give an organizational advice for implementing ICT possibilities

In addition, there is the option of adding a learning outcome yourself; if you have taken steps that you cannot include within the four learning outcomes, you may add one to increase your score in this area.

## 5 Action Plan and Portfolio

To increase your chances of success, you will draw up an Action Plan that sets out which learning objectives you will achieve and in what way. You will also create a portfolio and fill it with self-assessments, evidence, timesheets and other internship-related items.

### 5.1 Action Plan guidelines

During the first weeks of the internship, the student must draw up an Action Plan<sup>1</sup>. This document describes the approach of the entire internship with as a starting point the achievement of the set learning objectives. Among other things, the internship placement, learning objectives, tasks and the intended approach to achieve the learning objectives are set out and clarified. The Action Plan maximises the chance of successfully achieving the learning objectives and thus instils confidence in a successful internship.

The Action Plan should generally meet the course requirements. A good source for this is the book (Glabbeek, 2012 (2nd edition)): Successful studying, communicating and researching - Alphabetical reference work for higher education (2012) by N. van Glabbeek (see also [H9 Reference books](#)). comments/amendments are valid:

- **Chapter 1: Background**

In addition to the topics referred to in this book, this chapter also contains a company overview with a brief description of the company, the core activities (and products and/or services), some key figures (such as, number of employees, turnover and so on.) and the organisational structure in the form of an organisation chart with explanation.

- **Chapter 2: Problem statement & objective:**

In the case of an internship, there is generally not a clear 'problem', in which case the objectives (your learning objectives) with the justification will suffice. You can also elaborate on the company's objectives with regard to the internship.

- In this section, you also state what your internship assignment(s) is/are in relation to the stated problem statement/objective.
- For each learning objective you define and substantiate, please state how and to which internship competencies of the programme your learning objectives relate, and the scope of these objectives. Make sure the content of your proposed learning objectives is set up in accordance with the internship competencies as found in [Appendix A](#). Make sure your learning objective is formulated in SMART terms (see [4.2](#)).
- For each learning objective you define and justify, please state what evidence you will provide for it in your portfolio. This should again be based on the interpretation of the internship competences as found in [Appendix A](#).
- For the learning objectives that have been defined, you will produce a (milestone) schedule. This will include concrete activities that are based on the learning objectives set and that contribute to achieving these learning objectives.

You are required to submit your Action Plan to your internship mentor no later than three weeks after you start (see [H8 Schedule](#)). You will receive feedback with a 'Go' or 'No go'. In the event of a 'No go', you must submit an improved version (in which you have incorporated the feedback you received) no later than the specified date (also see the schedule).

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<sup>1</sup> It is worthwhile noting that the Action Plan is similar to a Personal Development Plan (PDP) in combination with a Personal Activity Plan (PAP): have a look at (Glabbeek, 2012 (2nd edition)).

## 5.2 Portfolio guidelines

During the internship, you will maintain a portfolio. This is a file that shows what you have done and learned during the internship. The internship portfolio must consist of at least the following elements:

- Approved Start Document for Internship (see [Appendix C –HBO-ICT Start document](#)), It will also suffice if it is included in OnStage.
- Action plan (see [5.1](#)). This can be incorporated in your final internship portfolio), It will also suffice if it is included in OnStage.
- The documentation in full (clear and comprehensive, fully completed and signed where necessary) relating to the learning objective: Learning to operate professionally (see [4.1](#)). This means the following documents:
  - Baseline measurement
  - Mid-term employer assessment including signatures
  - STARRT-form for the mid-term employer assessment, including action points
  - Final employer assessment including signatures
  - STARRT form for the final employer assessment
  - Self-assessment form based on your choice of track
- For each substantive learning objective (at least four learning objectives, see [4.2](#)) from your Action Plan you are required to submit the proposed evidence (examples of mid-term and final products) and a STARRT form in which you look back on the implementation of the learning objective and carry out a self-assessment
- A timesheet filled in and signed by you, which is also signed by your business mentor (see [Appendix F – Time recording](#)).

This would produce the following set-up:

- Chapter 1: Background
- Chapter 2: Problem statement & objective
- Chapter 3: Learning objective professional behaviour
  - Baseline measurement
  - Mid-term assessment
  - STARRT form mid-term assessment
  - Final assessment
  - STARRT form final assessment
  - Self-assessment form (based on your choice of track)
- Chapter 4: Learning objective 1
  - Evidence
  - STARRT form
- Chapter 5: Learning objective 2
  - Evidence
  - STARRT form
- Chapter 6: Learning objective 3
  - Evidence
  - STARRT form
- Chapter 7: Learning objective 4
  - Evidence
  - STARRT form
- Chapter 8: Learning objective 5 (if it cannot be covered by the previous learning objectives)
  - Evidence
  - STARRT form
- Appendix 1: Approved Start Document
- Appendix 2: Time recording

**Portfolio concepts**

You will submit an initial coherent draft version of the portfolio to your internship mentor (digitally) within four working weeks of the start of the internship. You will then keep the portfolio up to date and submit it to the internship mentor as scheduled (unless otherwise agreed), so that he/she can monitor its progress and give you feedback. Note: this is your responsibility and initiative!

**Final portfolio**

At the end of the internship, you will submit your final portfolio digitally through OnStage (see [H8 Schedule](#)). You will be allowed two attempts at submitting your final portfolio. If the second try is unsatisfactory, you will have to start a new internship trajectory and thus do another semester's internship.

**Portfolio requirements**

The portfolio must meet the following requirements:

- The portfolio is complete and accessible,
- The portfolio itself (without appendices) is a max of 35 pages,
- The self-assessment is self-critical, reflective and substantiated,
- The reflections lead to conclusions,
- The selection of products used as evidence has been substantiated,
- The evidence is authentic, up to date, relevant.

In general, the portfolio must meet the standard course requirements. A good source for this is again Successful studying, communicating and researching - Alphabetical reference work for higher education (2012) by N. van Glabbeek (Glabbeek, 2012 (2nd edition)).

## 6 Points of contact and responsibilities

This chapter clarifies each party's expectations of their role during the internship. To this end, the points of contact are first outlined, after which the various roles are defined along with the tasks and responsibilities that go with them.

### 6.1 Points of contact

During the internship, there are several points of contact:

- *Weekly:* you will send your internship mentor an email with your progress compared to the schedule in the Action Plan. Three situations may occur, namely:
  - you are ahead of schedule
  - you are on schedule
  - you are behind schedule
- In the third instance, you must specify
  - the reason
  - the action (what needs to be done to catch up) or alternative course
  - an amendment to the schedule if necessary
- *According to the schedule,* you will send the portfolio to your internship mentor at the same time as your weekly email (see [H8 – Schedule](#)).
- *About halfway through the internship period:* the internship mentor will visit the internship company. If visiting you is not feasible because your internship is abroad, you will make other arrangements with your lecturer and your business mentor. During the internship visit, you will in any case discuss a mid-term and/or final assessment which has been completed by your business mentor. You will also have to demonstrate your work and show your workplace. Further potential topics of discussion are the Action Plan, the scheduling, the SMART objectives, the STARRT forms and/or any problems that have arisen.
- *Return day.* A return day is organised during the internship period on which you will give a presentation about your internship.
- Where applicable: email/telephone support for questions and meetings with your internship mentor.



## 6.2 Roles and responsibilities

### Internship coordinator

- if necessary, assesses whether a company and/or an internship assignment is compliant in terms of the requirements.
- assigns an internship mentor to the student.
- can, in consultation with the internship mentor and the business mentor, decide to transfer the student to another company or to reject a part of the work.
- will make decisions in the event of differences of opinion between the student and the supervisor(s).
- is responsible for the contents of the HBO-ICT Handbook for the Internship.
- is responsible for the timely completion of the HBO-ICT Handbook for the Internship.

### Internship mentor (1st examiner)

- fulfils an important role, he/she not only makes suggestions or proposes improvements to the student's work, but also makes critical comments and asks critical questions.
- is acquainted with the contents of the HBO-ICT Handbook for the Internship.
- is the contact person between the student and the internship company and is responsible for monitoring the progress and supervision of the internship.
- initials the start document for approval.
- makes agreements with the student about communication before the internship starts.
- maintains periodic contact with student and business mentor.
- assesses draft products (portfolio, forms, and so on) within 15 working days of receipt and in accordance with the procedures and criteria described in the HBO-ICT handbook.
- assesses the final portfolio within 10 working days of receipt.
- visits the student no later than halfway through the internship period.
- discusses (mid-term) performance with the student and business mentor.
- communicates the results of the internship with all involved parties.

### Co-reader (2nd examiner)

- is acquainted with the contents of the HBO-ICT Handbook for the Internship.
- assesses products (portfolio, forms, and so on) within 15 working days of receipt and in accordance with the procedures and criteria described in the HBO-ICT handbook.
- assesses the final portfolio within 5 working days of receipt.
- Initials the final assessment form for approval

### Business mentor

- Is a support point for the student in the company where the internship takes place. Directs the student to the right information in the company and helps establish contacts with employees.
- together with the student, evaluates the internship activities and the student's performance within the company.
- is acquainted with the contents of the HBO-ICT Handbook for the Internship.
- is responsible for the internship assignment within the company.
- introduces the student to the company and sets the student assignments.
- makes agreements with the student about the development of the internship and the format and approach of the supervision.
- assesses the student on the basis of assessment forms, discusses the assessments with the student and initiates documents, reports, etc. in good time, either as seen or for approval.
- guides the student in achieving the learning objectives set by the student.
- conducts verbal consultations with the student at least once a week.

maintains contact with the internship mentor and contacts him in the event of problems that could be detrimental to the working relationship or problems of a personal nature that might prevent the student from achieving his/her objectives.

### Intern/Student

Informs him/herself thoroughly about the objectives, rules and procedures regarding preparation and implementation and is aware of the contents of the HBO-ICT Handbook.

gathers information (in consultation with tutors, fellow students and Internship Office) about internships offered and independently arranges an internship (at home or abroad) with appropriate assignments.

verifies the company and the assignment against the requirements and checks the required level of the business mentor.

initials the Start document and submits it to OnStage for electronic signature by the internship coordinator.

makes an agreement with the company about the start date in the event that he/she does not meet the requirements in time.

provides the internship company with the HBO-ICT Handbook on Internship

draws up a milestone plan for the entire internship period prior to the commencement and includes it in his action plan and portfolio. Produces detailed schedule prior to each phase.

takes care of the application and signature of the internship agreement(s).

provides the company with the requested personal details for the purposes of income tax and social security contributions.

checks whether the necessary insurance has been taken out and if not takes it out (third-party liability, accidents, medical expenses, etc.).

checks whether the company has insured him/her during the internship in accordance with the Civil Code.

draws up the required documents and sends them to the parties involved in a timely manner, in accordance with the instructions in the HBO-ICT internship handbook.

carries out the assignment(s) as agreed.

assesses his/her own work according to the criteria in the HBO-ICT internship handbook

plans and organises the company visit, provides agenda and content (such as presentation and/or demo) for the visit.

gives a presentation on the return days and attends presentations by fellow interns and incorporates feedback on his/her presentation in his/her portfolio.

Writes a portfolio according to instructions and includes reports in the appendices that meet the set requirements.

## 7 Assessment

The internship mentor (also called first examiner) assesses the internship on the basis of your submitted portfolio. In conjunction with this assessment, the portfolio is then also assessed by a second examiner, the so-called co-reader, to ensure its reliability and objectivity.

In summary, you will be assessed on:

- Your portfolio, which must meet all the requirements set (see [5.2](#)).
- Your professional behaviour in the company (see [4.1](#)).
- The substantive learning objectives with self-assessments and evidence (see [4.2](#)).
- Your timesheets (conditional) (see [Appendix F – time recording](#)).

The internship mentor in the role of 1st examiner and the 2nd examiner will assess all of the above using the Final Assessment Form for Internship (see [Appendix H – Final assessment Internship](#)). This form also contains the assessment details. Therefore, please do check what is expected of you before you start your internship and when you submit your final portfolio!

### 7.1 Sharing experiences

There is no obligatory final presentation or delivery at the end of the internship that counts towards the assessment. However, you will be asked to participate in the return day and you may be asked to share your experiences with other students during the introduction week for the following semester.

### 7.2 Assessment of the internship

In the semester following your internship, an assessment session will be held in which we will assess the internship in terms of testing, organisation and content.

## 8 2022-2023 Schedule

Semester 1 2022-2023		
Calender week	Date	Activity
36	Mon 5-9-2022	Start internship
38	Fri 23-9-2022	Deadline PoA & Start form passed (at the latest 17.00h)
39	Fri 30-9-2022	Handing in first concept report (at the latest 17.00h)
40	Fri 7-10-2022	Inleveren herkansing PvA (uiterlijk 17.00h)
43-45	24 oct - 11 nov	Company visit (student is responsible)
43	Fri 28-10-2022	Handing in concept report (at the latest 17.00h)
49	Fri 9-12-2022	Handing in concept report (at the latest 17.00h)
2	Sun 15-1-2023	Deadline chance 1, Sunday 23.59h
5	Sun 5-2-2023	Re-sit (C2), Sunday 23.59h
15	Fri 14-4-2023	Alternative re-sit (K2) End of the week Friday 17.00h
26	Fri 30-6-2023	Alternative re-sit (K2) End of the week Friday 17.00h

Figure 1 Schedule HBO-ICT Semester 1 2021-2022

Semester 2 2022-2023		
Calender week	Date	Activity
6	Mon 6-2-2023	Start internship
8	Fri 24-2-2023	Deadline PoA & Start form passed (at the latest 17.00h)
9	Fri 3-3-2023	Handing in first concept report (at the latest 17.00h)
10	Fri 10-3-2023	Inleveren herkansing PvA (uiterlijk 17.00h)
14-16	3 apr - 21 apr	Company visit (student is responsible)
14	Fri 7-4-2023	Handing in concept report (at the latest 17.00h)
20	Fri 19-5-2023	Handing in concept report (at the latest 17.00h)
24	Sun 18-6-2023	Deadline chance 1, Sunday 23.59h
27	Sun 9-7-2023	Re-sit (C2), Sunday 23.59h
	Vr #-#-2023	Alternative re-sit (K2) End of the week Friday 17.00h
	Vr #-#-2023	Alternative re-sit (K2) End of the week Friday 17.00h

Figure 2 Schedule HBO-ICT Semester 2 2021-2022

## 9 Reference works

Glabbeek, N. (2012 (2nd edition)). *Successful studying, communicating and researching - Alphabetical reference work*

*for higher education*. Amsterdam: Pearson Education Benelux.

## 10 Contact details

### ***HZ University of Applied Sciences***

#### Address

Het Groene Woud 1-3  
4331 NB Middelburg

Tel.: +31 (0)118 489 890

Email: [info@hz.nl](mailto:info@hz.nl)

Www: [www.hz.nl](http://www.hz.nl)

### ***Coordinator HBO-ICT***

Name: Stephan de Nijs

Email: [Stephan.de.nijs@hz.nl](mailto:Stephan.de.nijs@hz.nl)

### ***Coordinator graduation internship HBO-ICT***

Name: J.I. Cijssouw MSc

Email: [jolene.cijssouw@hz.nl](mailto:jolene.cijssouw@hz.nl)

### ***HZ Internship Office***

Room: F010

Opening hours: Mon to Thu from 9 a.m. to 4 p.m. and Fri from 9 a.m. to 12 p.m.

Tel.: +31 (0)118 489 111

Outside opening hours: +31 (0)118 479 207  
(8:30 - 17:00)

Email: [stage@hz.nl](mailto:stage@hz.nl)

### ***International Office***

Room: L110

Tel.: +31 (0)118 489 747

Email: [internationaloffice@hz.nl](mailto:internationaloffice@hz.nl)

## Appendix A – Internship competencies

Software Engineering Internship Competencies	
LO1: You can make an analysis of a software engineering design problem in a project context.	
Satisfactory	Good
That is why you should always do the following:  You start by describing the system context of the problem. Who and what are affected by the problem and what exactly do they want to see resolved? You then map out the requirements, preferences and constraints of your solution: the requirements must be identified. In doing so, you use at least two sources from different categories (Grip op Requirements book), in addition to your client. These sources are not chosen randomly, but are substantiated. Because your objective is to get as complete a picture as possible of the requirements. You record the requirements in a logical place so that you can easily retrieve and use them in a later phase of the project. Naturally, you validate the requirements to ensure that you have the correct and most complete picture possible.  To do this, you should use at least three method cards from Problem Definition and Analysis ( <a href="https://ictresearchmethods.nl/Methods_per_Project_Phase">https://ictresearchmethods.nl/Methods_per_Project_Phase</a> )	Everything in satisfactory, plus:  The source and the changes to the requirements found are traceable: you can always find out why a requirement has changed. The validation process is set up in such a way that you can argue how complete and correct your requirements are (Grip op Requirements book)
LO2: You can select, evaluate (partial), document and communicate solutions for a software engineering design problem in a project context.	
Satisfactory	Good
For each requirement, you devise at least two designs, functional or technical. You must describe these in such a way that you can discuss them with an expert. These can be diagrams, prototypes and/or written texts. Together with this expert, you decide what the best solution is for the requirement. Then you record the design such that you can start to realise it.  To do this, you should use at least two method cards from Design ( <a href="https://ictresearchmethods.nl/Methods_per_Project_Phase">https://ictresearchmethods.nl/Methods_per_Project_Phase</a> )	Everything in satisfactory, plus:  The designs contain arguments that enable you to make the right choice: you have clearly looked beyond the material that is offered to you on the course.
LO3: You realise a suitable solution to a software engineering design problem in a project context	
Satisfactory	Good
To realise your design, you first need a working environment and appropriate tools. It goes without saying that the code you produce and record is functional and readable. The fact that you write functional and readable code is not enough. The code must, of course, lead to a high-quality solution: as such, you must carry out code reviews in order to improve the quality of your code.	Everything in satisfactory, plus:  In addition to code reviews, you will also perform (automated) tests and/or experiments so that you can better assess the quality of your code.  To do this, you should use at least two method cards from Realisation ( <a href="https://ictresearchmethods.nl/Methods_per_Project_Phase">https://ictresearchmethods.nl/Methods_per_Project_Phase</a> )
LO4: You can give a suitable advice for solving a software engineering design problem in a project context.	
Satisfactory	Good
You draw a conclusion about your realised solution in an appropriate way and provide substantive recommendations or follow-up steps.	Everything in satisfactory, plus:  You refer back to the problem and the requirements and link these to your realised software.

Data Science Internship Competencies	
<b>LO1: You can set up a data science process in a project context.</b> <b>Satisfactory</b> <p>First, you briefly outline the client's organisation. Of course, this organisation has objectives, depending on and in relation to the industry they are in, the products or services they offer and the mission and vision (think BSE). You have been asked to solve a problem that they have. As such, you need to clearly identify that problem, in relation to the objectives. In CRISP-DM, these objectives are called business objectives. Business success criteria must be drawn up to be able to measure whether the business objectives are being met. Those criteria are described in relation to the business objectives, including clear information requirements that contribute to achieving them. Once you have derived suitable data mining goals from the business objectives, you also know which model techniques can be used. The intended results for the model techniques are described, including the metrics to be pursued, in relation to the data mining goals. With regard to the model techniques, a well-reasoned choice has been made for a supervised machine learning technique. Relevant activities to create a technique are described. The assumptions about the data in relation to the chosen technique have been included. In addition, it has been argued which data should be added to support the achievement of the data mining success criteria. Or, a clear argument has been made why additional data would not add value. The dimensions of the data structure are of course defined, but also the meaning, units and data types of the variables. All this in relation to the data mining goals.</p>	<b>Good</b> <p>There are additional descriptions to clarify the context in which the client operates. The business objective(s) including information requirements are described by you very clearly and unambiguously. In doing so, you have correctly applied the SMART principle. You have also included how the score on intended metrics will be assessed/interpreted, based on data mining goals. Despite the fact that you initially applied one or more supervised learning techniques, you have argued why an unsupervised machine learning technique would or would not contribute to the end result. In addition, a glimpse into the future is provided, describing which data should be collected in order to be able to apply other types of model techniques. The origin of the data is included, including the frequency of delivery and confidentiality aspects.</p>
<b>LO2: You can collect and address relevant data in a project context</b> <b>Satisfactory</b> <p>An exploratory data analysis has been structured and has been clearly defined. In doing so, all variables were provided with a standard statistical summary, which is appropriate to the data type of that variable. Visualisation is used where appropriate and applicable. An assessment is made about the quality of the data on the basis of the exploratory data analysis. The analysis is substantiated by statistical test(s). Rows and columns are removed/retained by means of actions appropriate to the data structure. This is in line with the assessment regarding the quality of the data. You have of course performed additional preparation, including the handling of missing data, transformation and conversion. In addition, you have argued why, which imputation and which scaling has been applied and what the result of this is. You have clearly described what the independent variables and the dependent variable (target) are in the data set. You have also included evidence for newly created and/or transformed variables. You have demonstrated that the data has been compiled in a usable format. In addition, you have clearly indicated on the basis of which key the merge took place. All this implies that you have done quite a lot with the original data. It is therefore essential that you demonstrate that the whole process is both logical and consistent. Specifically, you have provided insight into which conversion of data has taken place for a specific visualisation. It is clear how the conversion has been handled in relation to the quality of the data. The data has been made available in such a way that the chosen model technique can work with it. Finally, you have explained what the selected model technique expects of the data set(s) and how this (these) has (have) been prepared.</p>	<b>Good</b> <p>The summary(s) and visualisation(s) apply to (the relationship between) different variables. You have given a conclusive argumentation on the usefulness of the data for achieving the data mining goals. In order to provide insight into the progress and coherence, you have made a comparison with the previous CRISP-DM cycle (the previous iteration) and the differences (or not) have been clearly presented and explained. In addition, you have included your assessment of the result of these actions on the quality of the data. Various imputation techniques have been compared and the differences explained in relation to your own data. You have also compared different scaling techniques and explained the differences in relation to your own data. The potential conversions/transformations that were considered and why the final decision was made are described. You have also indicated that there are various merge techniques, including which one is the most suitable. The merging has taken place on 1 or more aspects and/or aggregations of datasets. You have also substantiated why this specific format and this specific visualisation were chosen. The data were represented in different ways, after which a reasoned choice was made for the most suitable variant.</p>
<b>LO3: You can perform data analysis in a project context.</b> <b>Satisfactory</b> <p>A test design has been described and developed. You have argued how this prevents over-/underfitting. In addition, you have described and applied model techniques. It has been clearly stated what the technique is, what it does and what the output is. Standard statistical tools were used to test the results of the model. The model has been optimised on the basis of these results. The results of the metrics were interpreted and described. Finally, you have reasoned whether or not the established success criteria have been achieved, and why</p>	<b>Good</b> <p>In preparing the test design, you have taken and explained extra measures to strike the right balance between bias and variance. The test design also contains multiple scenarios/test standards. Various tuning parameters were used and documented during the execution of the technique. You have clearly explained the test using statistical tools and the consequences of the result. Finally, you applied and explained several techniques, including the interpretation of the metrics in relation to the success criteria</p>
<b>LO4: You can evaluate and deploy results of a data science process in a project context.</b> <b>Satisfactory</b> <p>The results of the data science process have been evaluated and a statement made as to whether the business objectives and data mining goals have been achieved, or not, and why. In addition, you have developed a proposal in which relevant and well-founded (possible) follow-up actions have been formulated. Follow-up actions for a subsequent iteration and/or implementation of the results were also defined on the basis of the data science process. Finally, you have drawn up a concept plan for the client, in which the actions to implement and the continuity of the data product are safeguarded.</p>	<b>Good</b> <p>The consequences of the outcome of the data science process have been clearly defined. In doing so, you provided an insight into which steps the data science process could have been improved. The follow-up actions are SMART formulated so that the client can immediately initiate a follow-up project. The plan has shown why and how it fits within the client's business context</p>



Business IT Consultant Internship competences	
<b>LO1: You can make a validated current situation analysis (IST) for the ICT provisions</b> <b>Satisfactory</b> You have mapped out the organisation (as in BSE) with the standards and methods available. This sets out what the organisation stands for, what it wants to grow towards and how it is set up and how it works. It is important that the organisation's objectives are clearly expressed. In relation to these, you should describe what the "problem" is that the organisation is currently facing. Now is the time to delve deeper. To do this, you first need to identify all of the stakeholders and find out what processes and related information flows exist and how they work. You record these using standard methods. At the same time, you are looking for possible sticking points. You have now established the current situation (IST). The next step is to determine the target situation (SOLL), in other words how to get to a situation where the problem no longer exists. To do this, it is important that you collect and document the organisation's preferences/requirements/constraints, also look at your own ideas and do not just focus on the organisation's preferences/requirements. Preferences/requirements/constraints are further detailed into functional requirements and selection criteria. After all, you want to remove sticking points and the question is whether this can also be done by using ICT facilities. You will make a well-founded assessment of the feasibility of the SOLL situation. After all, is it realistic to try to meet all the preferences/requirements and also consider the constraints?	<b>Good</b> There is a whole package of standard methods you can use to map an IST and SOLL situation. However, you have used additional or alternative methods (ICT methods map set) in order to obtain a more thorough insight. In doing so, you paid extra attention to documenting the relationships between the elements of the business processes and information flows. You also paid particular attention to the validation of your results. Because you have found at least two stakeholders, all of whom hold different positions, to provide you with feedback. Finally, you have established the implications of arriving at the SOLL situation with regard to making the solution(s) manageable, and the actual feasibility of the solution(s).
<b>LO2: You can make a validated and considered (SOLL) process design</b> <b>Satisfactory</b> There are several ways to realise the SOLL situation. It is up to you to make a good choice here and thus arrive at a design for the SOLL situation. Make this choice methodically. You substantiate which design you recommend (and also why the others are rejected). In doing so, you demonstrate that the eventual design is the result of/appropriate to your analysis results. It is important that your design is future-proof, in other words, that you look ahead and take into account the management/implementation/optimisation of the chosen modifications. Finally, you will update your documentation with recommendations appropriate to the potential constraints you see in the organisation in relation to the chosen solution.	<b>Good</b> You give the organisation a choice of at least two designs. You have provided both with extensive pros and cons. To demonstrate that your designs are future-proof, two plans are made, one for the medium term and one for the long term. In this way, the organisation can make a good evaluation of what it needs to consider and what it might come up against. In addition, you have substantiated why the subjects are realistic, given the requirements and context of the organisation, and feasible.
<b>LO3: You can realize an implementation(plan) and test the acceptance</b> <b>Satisfactory</b> How can you demonstrate that the design has been prepared in such a way that it can be implemented within the organisation? You can do this by "translating" the design into a detailed implementation plan, proof-of-concept, prototype or other form in which you can demonstrate that your design is suitable. In exceptional cases, you can also perform the actual implementation yourself. In all cases, the implementation shall be fully in line with the previous phases. The final chosen design is discussed in a structured manner with the stakeholder(s) and any modifications/improvements can be included in the next cycle. In other words, you make an appropriate acceptance test so that you can evaluate the chosen development. Finally, you have studied all aspects of the organisation that are necessary to be able to carry out the implementation. This includes available resources, capacity, time, budget and the necessary quality.	<b>Good</b> What matters now is that the organisation has confidence that a possible implementation is appropriate and that it will work. For this reason, you paid particular attention to the interrelationship between these and the previous phases. In addition, you have conducted the acceptance test you drew up with at least two stakeholders, all of whom hold a different position within the organisation. You documented the result of that test after validation with them. With regard to the impending change within the organisation, you looked for additional strategies that fall outside the professional knowledge provided. As a result, you have demonstrated why they are specifically appropriate for this organisation.
<b>LO4: You can give organizational advice for implementing ICT possibilities</b> <b>Satisfactory</b> As an organisation, you are in fact never completely ready. It continues to be a dynamic system. That is why you have developed a proposal in which relevant and well-founded (possible) follow-up actions have been formulated. During the phases you went through, you have collected and created a lot of material. It is important that all your material is transferred properly, which requires more than just putting all the files on SharePoint.	<b>Good</b> The (potential) follow-up actions are SMART formulated so that the client can immediately initiate a follow-up project. During the phases you went through, you have collected and created a lot of material. When you were in the midst of it, you understood exactly what was meant by it. But will you still know it a year from now? And did your client understand how they could continue with all your material, then and especially in the future. In other words, it is important that all your material is transferred to the client in an appropriate and professional manner. Throughout your internship, you have clearly sought to deepen and broaden your knowledge, which was then (partially) applied.

## Appendix B - Self-assessment form

Self-assessment		
LO1		
Satisfactory	Good	Excellent
LO2		
Satisfactory	Good	Excellent
LO3		
Satisfactory	Good	Excellent
LO4		
Satisfactory	Good	Excellent
LO5: Additional learning moments during the internship which can not be covered by the previous 4 learning outcomes		
Satisfactory	Good	Excellent

## Appendix C – HBO-ICT Start document

HBO-ICT START DOCUMENT	
<b>STUDENT DETAILS</b>	
Name:	
Student number:	
Internship mentor:	
SLC:	
Track: Software Engineer (CU75033) / Data Science (CU75034) / Business IT Consultant (CU75035)*	
<b>DETAILS OF INTERNSHIP LOCATION</b>	
Company/institution:	
Address/place of business:	
Telephone:	
Website & email:	
Industry:	
Brief description of business activities and products:	
<i>Please take sufficient time.</i>	
Business mentor:	
Directs the student to the right information within the company and helps in establishing contacts with employees:	
Business mentor's telephone No:	
Business mentor's email:	
<b>REQUIREMENTS/ CONDITIONS FULLY MET</b>	
<input type="checkbox"/> the student meets all the requirements as stated in: section 2.1 Internship admission	
<input type="checkbox"/> the internship placement meets all the requirements as stated in: Section 2.2 Internship placement requirements	
<input type="checkbox"/> In the above referenced internship period, it is reasonable to expect to do 567 hours of internship	
<b>BASELINE MEASUREMENT OF PERFORMANCE (APPENDIX D)</b>	
<input type="checkbox"/> baseline measurement of performance (as described in section 4.1) is included as an appendix to this start document ( <b>form to be signed by the student only</b> ).	

[Continued on next page]

**INTERNSHIP ACTIVITIES/ASSIGNMENT(S)**

*Describe the internship activities/assignments here. Please take sufficient time.*

**LEARNING OBJECTIVES AND INTERNSHIP COMPETENCES**

*Substantiate here that the chosen learning objectives can be addressed within the different internship competences chosen (see section 4.2), this can also be done by mentioning existing (provisional) learning objectives and/or by linking competences with assignments/business activities. Please take sufficient time.*

**SIGNATURE**

Date completed:

Student's signature for truthful completion:

## Appendix D – HBO-ICT (Employer) Assessment Form Internship

<b>Student:</b>	
<b>Student number:</b>	
<b>Business mentor:</b>	
<b>Date:</b>	

### INTERACT PURPOSEFULLY

Acting with an intended purpose: You are pro-active in your actions and communication. You are aware of your actions/communication and how to adapt to various situations and target audiences. You are capable to convey your message professionally.

*Minimal two learning goals plus approach what you want to develop during your internship (based on PPD-A portfolio, translated to PPD-C level:*

*Feedback/comment:*

### RESEARCH-ORIENTED PROBLEM SOLVING

You are capable of critically viewing ICT-assignments from different angles/perspectives, identify problems, to come to an effective approach and find suitable solutions.

*Minimal two learning goals plus approach what you want to develop during your internship (based on PPD-A portfolio, translated to PPD-C level:*

*Feedback/comment:*

### FUTURE-ORIENTED ORGANISING

You explore the organisational context of ICT assignments. You are capable of making rational, sustainable and ethical deliberations. You are also capable of managing all different the aspects of an assignment.

*Minimal two learning goals plus approach what you want to develop during your internship (based on PPD-A portfolio, translated to PPD-C level:*

*Feedback/comment:*

--	--

#### PERSONAL LEADERSHIP

You are entrepreneurial towards ICT assignments and your personal development. You pay attention towards your own ability to learn. You have a clear focus on what kind of ICT professional you want to become and/or what kind of professions you want to fulfil.

*Minimal two learning goals plus approach what you want to develop during your internship (based on PPD-A portfolio, translated to PPD-C level:*

*Feedback/comment:*

#### FINAL ADVICE QUALITY OF WORK

Only to be completed at final assessment.

☐ Underperformed

☐ Conform

☐ Excellent

*Comments/feedback:*

Business mentor approval	Student agreement

Note. Please find below some guidelines and explanations on how to fill in this form.



**Explanatory notes Employer Assessment Form****Interact purposefully**

Learning outcomes level 'Competent':

1. When carrying out an assignment or project, you make it clear who is influenced by your solution/work and you know who you need to involve and who you need to inform. In addition, you also actively look at interest groups, or stakeholders who are not directly in your environment, but who can be part of your stakeholders. You take action yourself to find out. You realize that the people in your immediate environment (internship / minor) can influence the results. You proactively take action on this.
2. You realize that you have to describe well WHAT you want to communicate and WHAT goal you want to achieve with it. You think carefully about HOW you can best do that. You have a proactive attitude in this.
3. You proactively investigate what your role is, your tasks and your responsibilities. You do not wait, but actively ask questions about this. You actively organize feedback moments in order to develop yourself and also dare to give feedback to others.
4. You listen and are open to different views and ideas. You dare to exchange ideas about this and you are not afraid to disagree. You can sharpen your views as a result.
5. You proactively take actions to get to know the people you work with better. You know what the importance of building trust is and what effects that has on, for example, daring to take part in a robust discussion, the degree of involvement and daring to address each other, etc.

**Research-oriented problem-solving**

Learning outcomes level 'Competent':

1. You obviously map out the current undesirable situation and the future desired situation. You place the problem in the context of the organization and the environment of the organization. Where necessary and relevant, you can place the problem in a broader context. You can perform analyses thanks to the learned techniques and actively look for new instruments where necessary and relevant.
2. You stimulate yourself and others to investigate and weigh multiple solution directions.
3. You are curious throughout the entire solution process, looking at the problem and possible solutions from different perspectives. You have a keen eye for practical feasibility and are critical. You use (online) sources and experts.
4. You have made a well-thought-out approach in advance. You substantiate choices, decisions. You actively ask for feedback on this and learn from it.

**Future-oriented organising**

Learning outcomes level 'Competent':

1. You actively plan and monitor your training activities, internship and minor activities and project activities using your planning tool(s).
2. You devise a (systematic) approach to projects and assignments in advance. You ask for feedback on this approach and process it. You have a keen eye for the end result you want to achieve.
3. You think about the costs of your approach/solution. You recognise opportunities and risks. You actively make an inventory of whether you are dealing with legal rules in the approach/solution. You are aware in advance that there may be ethical sides to your approach/solution and set your limits in this.[1]

4. You check whether your solution to the ICT issue is in line with the existing way of working and the existing procedures.
5. During the execution of work, you regularly consider whether what you do is ethically justifiable.[2] You know your own limits in cooperation with others and clearly indicate them. You demonstrably take other people's personal and professional boundaries into account.

*[1] This concerns the ethical standards that apply in the organisational context in which you work.*

*[2] This is about the ethical implications of your own behaviour and choices.*

### **Personal leadership**

Learning outcomes level 'Competent':

1. You actively develop your proactive attitude. If opportunities arise, you research them.
2. You can motivate yourself and others. You also organise help and support when needed.
3. You can clearly indicate within the team what your strengths are. You can indicate what you want to develop yourself on.
4. You actively ask for feedback to increase your learning capacity. You regularly look back on what you have learned, what did or did not work and what knowledge you still want to gain. You ask for help in time.
5. You can indicate what your strengths and weaknesses are within the context of your specialisation. You can describe yourself as an ICT professional.



## Appendix E – Example STARRT Form

The self-assessments (description, justification and reflection) of the learning objectives should be performed by using the STARRT method. STARRT stands for Situation, Task, Action, Result, Reflection and Application. Below is an example of a STARRT-form that can be used for the self-assessments according to the STARRT method. For more information about the STARRT-method, see the book *Successful studying, communicating and researching* by N. van Glabbeek (see also H9).

Student name:		Student number:	
Internship mentor:			
Learning objective/competency:			
Date:			
Title and number of pieces of evidence:			
S	Describe the situation(s) in which you can demonstrate that you have acquired the competence. Describe briefly what the situation was and/or what task it involved.		
T	Describe the exact role/task you had in the above situation(s). Indicate whether the task was complex and demonstrate this. What did you have to do?		
A	Describe your approach: the activities you undertook in the context of this assignment. What did you specifically do to fulfil the above tasks/roles?		
R	Describe the outcome of your approach to the task (of your activities) and how those involved reacted to it. What was subsequently done with this outcome?		
R	Why did you approach it the way you did? Why was that? How did that happen? What did you learn from it, if you look at how you went about it (and what came out of it)? What would you do differently next time and why? What went well and what were the pitfalls?		
T	Provide an example of another situation in which you can apply this competence. And how do you avoid making the same mistake, what do you do to overcome it?		

## Appendix F – Time recording

Name:

Student no.:

Month	Week	Mon	Tues	Wed	Thurs	Fri	up to p/w	cumul.
January	1						0	0
January	2						0	0
January	3						0	0
January	4						0	0
January	5						0	0
February	6						0	0
February	7						0	0
February	8						0	0
February	9						0	0
March	10						0	0
March	11						0	0
March	12						0	0
March	13						0	0
March / April	14						0	0
April	15						0	0
April	16						0	0
April	17						0	0
April	18						0	0
May	19						0	0
May	20						0	0
May	21						0	0
May	22						0	0
May / June	23						0	0
June	24						0	0
June	25						0	0
June	26						0	0
June / July	27						0	0
July	28						0	0
July	29						0	0
July	30						0	0
July	31						0	0
August	32						0	0
August	33						0	0
August	34						0	0
August	35						0	0
Aug / Sept	36						0	0
September	37						0	0
September	38						0	0
September	39						0	0
Sept / Oct	40						0	0
October	41						0	0
October	42						0	0
October	43						0	0
October	44						0	0

November	45						0	0
November	46						0	0
November	47						0	0
November	48						0	0
Nov / Dec	49						0	0
December	50						0	0
December	51						0	0
December	52						0	0
December	53						0	0

Date of print: Internship hours 567

Student's signature (for truthful completion):

Hours incurred 0

Hours to be completed 567

Signature for approval Business mentor:

## **Appendix G – OnStage Stage management system**

The HZ uses the internship registration and tracking system OnStage. In OnStage, you can log your (graduation) internship and upload documents. All the actions that you, your internship coordinator and internship mentor will take with respect to your internship are managed in OnStage.

The first thing you need to do now is link yourself to a mentoring group in OnStage. OnStage can be found at <https://hz.nl/secure> or use this link: <http://HZ-onstage.xebic.com>. Login using your own HZ account.

How to register and what to do in OnStage can be found in the accompanying instructions. The programme itself also contains instructions for each step, as well as details of who will be doing what.

OnStage also features a vacancy board. Here you will find all the current internships and graduation projects known about at HZ. Interested in a vacancy? If so, you can apply directly to the organisation. Have you signed up for a mentoring group? If so, you will be notified automatically if a new work placement opportunity for your course has been posted on the vacancy board.

Should you have any questions about OnStage, please call or email the HZ Internship Office on (0118) 48 91 11 or email [stage@hz.nl](mailto:stage@hz.nl). You are also welcome to drop by at the reception desk.

## Appendix H – Final assessment Internship

Student:		Grade:
Student no.:	Assessment date:	
1st examiner (internship mentor):		Minimum grade 55
2nd examiner (co-reader):		Name + signature for approval
		Name + signature for approval

<b>Minimum requirements portfolio</b> All the components/requirements below must be answered with Yes	<b>70 points</b>	
The student must deliver a portfolio that meets all the conditions set: (section 5.2, summarised below)	Yes	No
Onstage or portfolio shall contain approved internship Start document (see Appendix B) and Action Plan (according to guideline 5.1): <ul style="list-style-type: none"> <li>Form and content as prescribed (book N. van Glabbeek &amp; internship handbook)</li> <li>H1 (Background) contains a company description (as prescribed in 5.1)</li> <li>H2 (Problem Definition &amp; Objective) contains four SMART learning objectives with justification and acceptable evidence to support them</li> </ul>		
Contains all documentation relating to the learning objective: Learning to operate professionally (as per 4.1): <ul style="list-style-type: none"> <li>Baseline measurement (employer assessment form filled in by the student at the outset)</li> <li>Mid-term feedback (completed mid-term employer assessment form)</li> <li>Mid-term self-assessment (completed STARRT form based on mid-term feedback)</li> <li>Interim self-assessment contains comparison with baseline measurement and resulting action points</li> <li>Final assessment (final employer assessment form)</li> <li>Final reflection (completed STARRT form based on the final assessment)</li> <li>Self-assessment form (based on your choice of track)</li> <li>All necessary signatures provided</li> </ul>		
Contains self-assessments by means of STARRT-forms including the accompanying evidence Contains self-assessments for each learning objective in the Action Plan The self-assessments are completed STARRT forms The evidence is authentic and relevant		
Includes a completed timesheet signed by both student and company supervisor (see Appendix E), accounting for at least 567 hours.		
The final report of the employer assessment based on the advice is up to standard.		
The layout of the report is correct, and should include: care, table of contents, numbering, use of visual material, page layout, clear description.		
The portfolio is delivered according to schedule.		

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[Final assessment Internship]

**Explanation of quality aspects.**

1. The quality of the Action plan is of a level that can consistently serve as a guideline throughout the internship. The contents of the Action plan are complete, concrete and of sufficient detail to guarantee the success as well as the level and complexity of the internship. The proposed evidence in the approved Action Plan has been delivered. The evidence is appropriate given the learning objective, the assignment and the expected level. Development is in accordance with the proposed plan, both in terms of activities carried out and the level and detail of the activities. In the case of deviations between the Action plan and the execution, a reasoned explanation as to why will be required. The Action Plan was submitted correctly and on time according to the schedule.
2. Student is able to explain the Situation, Task and Activities related to the learning objective in a concrete and careful way, whereby the Task is more detailed than the Situation and the Activities more detailed than the Task. The student is able to be critically reflective in STARRT-forms and has insight in how the knowledge, skills and experience gained can be realistically applied in follow-up situations.
3. The student him/herself fills in the assessment form that accompanies the internship with regard to their choice of track. The tutor reviews this assessment and either accepts the assessment as is or in the case of issues it can be downgraded or upgraded. Look for the self-assessment in [appendix B](#)). This is about obtaining a satisfactory or good grade; if the grade is satisfactory, it will remain the same, but if it is good, 9 points will be added. If there are significant reservations about the student's assessment and the report provided does not demonstrate a certain level/complexity of work, then 9 points will be deducted from the total.
4. Above average when the student has delivered all the material on time and in full. The student also utilised all draft deadlines. New/enhanced evidence was provided at the draft deliveries (i.e. not just handed in for the sake of handing in) and previous feedback was processed in a timely manner and where the student sent weekly updates. The weekly updates have always been sufficiently comprehensive (providing a good insight into the state of affairs). See also 6.1.
5. Student has behaved like a professional during the internship period. This means that the student was able to solve problems independently and work mainly on their own. It also means that the student asked for help when problems arose that he/she could not reasonably have solved on his/her own. Student handles contact points appropriately.
6. The student's written style is at a higher professional education level. The internship portfolio is written in Dutch (or in English in consultation). This implies that the text is easy to read with a minimum of noticeable spelling mistakes. Specifically formal language use, not colloquial or slang.
7. The student clearly indicates that he/she has worked methodically, has made concrete use of the method cards provided by the study programme, and subsequently provides a clear evaluation of the decisions made beforehand and how they worked out.
8. The student is expected to behave professionally in the workplace where the internship is being carried out. The student acts appropriately in the relevant business context and is open to the feedback he/she receives from the company. This performance is reflected in the company assessment.