CURRICULUM

The Academy Professional Degree in Computer Science

Department Roskilde
Department Næstved

January 2017
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6.4 Exemption rules

6.5 Complaints

6.5.1 Appeal

6.5.2 Appeals concerning legal matters

6.6 Finance

4.3 Criteria for assessment of study activity
1. Framework for the curriculum

1.1. Instructions
The curriculum comprises a national (common) part (blue letters), adopted by the educational programme-specific network of the Danish business academies, and an institution-specific part (black letters), defined by the educational institutions individually. The national part was prepared jointly by the institutions mentioned below, which have undertaken to safeguard national levels of competence and uniform exemptions. The national part of this curriculum was prepared by the following institutions:

Cphbusiness
Dania - University of Applied Sciences
Academy of Professional Higher Education Midjutland
Zealand Institute of Business and Technology
Business Academy South West
Business Academy Aarhus
Lillebaelt Academy
Copenhagen School of Design and Technology

1.2. The Programme is governed by the following acts and orders:

- Consolidated Act no. 935 of 25 August 2014 on Academies of Professional Higher Education

- Consolidated Act no. 1147 of 23 October 2014 on Academy Profession and Professional Bachelor Degree Programmes (the LEP Act).

- Executive Order no. 1047 of 30 June 2016 on Academy Profession and Professional Bachelor Degree Programmes (the LEP Executive Order)

- Executive Order no. 1500 of 2 December 2016 on Tests and Exams in Vocational Programmes (The Examination Order)

- Executive Order no. 107 of 27 January 2017 on Admission to Academy Profession and Professional Bachelor Degree Programmes

- Executive Order no. 114 of 3 February 2015 on Marking Scale and Other Forms of Assessment

- Executive Order no. 641 of 12 June 2014 on the Academy Profession Degree Programme in Information Technology (AP Degree in Computer Science).
1.3. Titles of programmes and candidates
The degree programme is called the AP Degree Programme in Computer Science.

Having completed the Computer Science degree programme, students are entitled to call themselves "Datamatiker AK" in Danish.

In English the designation is AP Graduate in Computer Science.

1.4. ECTS credits
The programme is a full-time education programme estimated at 30 months of full-time study. A year of full-time study is the work performed by a full-time student in the course of one year. One year of full-time study is equivalent to 60 ECTS credits (European Credit Transfer System). The programme is thus estimated at a total of 150 ECTS credits.

1.4.1 Figure 1: Programme structure and allocation of ECTS credits

<table>
<thead>
<tr>
<th>Programme elements</th>
<th>1st year of studies</th>
<th>2nd year of studies</th>
<th>3rd year of studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core areas</td>
<td>10 ECTS</td>
<td>10 ECTS</td>
<td>10 ECTS</td>
</tr>
<tr>
<td>Understanding Business</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 ECTS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Systems Development</td>
<td>15 ECTS</td>
<td>10 ECTS</td>
<td></td>
</tr>
<tr>
<td>25 ECTS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programming</td>
<td>30 ECTS</td>
<td>10 ECTS</td>
<td></td>
</tr>
<tr>
<td>40 ECTS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology</td>
<td>5 ECTS</td>
<td>10 ECTS</td>
<td></td>
</tr>
<tr>
<td>15 ECTS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective programme elements</td>
<td></td>
<td>30 ECTS</td>
<td></td>
</tr>
<tr>
<td>Internship</td>
<td></td>
<td>15 ECTS</td>
<td></td>
</tr>
<tr>
<td>Main Exam Project</td>
<td></td>
<td>15 ECTS</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>90 ECTS</td>
<td>60 ECTS</td>
<td>60 ECTS</td>
</tr>
</tbody>
</table>

1.5. Programme objectives and end target
The Computer Science programme aims at qualifying the students to independently perform the job of analysing, planning and realising solutions concerning development, enhancement and integration of IT systems in private and public enterprises in Denmark and internationally.

<table>
<thead>
<tr>
<th>Objectives for learning achieved by an AP graduate in Computer Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objectives for learning achieved</td>
</tr>
<tr>
<td>The learning objectives comprise the knowledge, skills and competencies which an AP Graduate in Computer Science must acquire during the programme.</td>
</tr>
</tbody>
</table>
End targets

Knowledge
The graduate has knowledge about:
- the standard practices, theories and methods used in software development
- fundamental company operations in relation to software development and
- the technological concepts and the technological platform of computer systems in relation to programming, error finding and commissioning.

Skills
The graduate is able to:
- methodically identify requirements to IT systems, including assessing whether the requirements are feasible within the set framework
- apply state-of-the-art programming techniques and tools for software construction, including ensuring the quality of the developed product
- document the work performed in a manner which makes the documentation useful to the specified target group
- apply relevant knowledge in connection with system development, programming and commissioning
- systematically perform error tracing and error repairs in connection with IT systems
- assess practice-related problems in relation to IT and select solution options and
- communicate practice-related problems and solution options to cooperation partners and users.

Competencies
The graduate is able to:
- participate in the development of the practical aspects of software development
- participate in project work in a competent manner
- participate in professional and interdisciplinary cooperation in connection with software development adopting a professional approach
- participate in a systems development process applying state-of-the-art methods, techniques and tools and
- in a structured context acquire new knowledge, skills and competencies in relation to the IT industry, including domain knowledge and technological knowledge and application of new methods, techniques and tools.

1.6. Level according to the Qualifications Framework
This programme meets the requirements of level 5 of the Qualifications Framework.

1.7. Effective date and transitional provisions
The national part of the curriculum takes effect on 1 September 2014 and applies to all students enrolled in the programme on that date or later and to exams initiated on that date or later.

The curriculum (the national part and the institution-specific part in the same curriculum) of September 2012 continues to apply to students enrolled according to this. This curriculum will be cancelled when the last student enrolled according to this graduates, although no later than 30 June 2016.

The curriculum (the national part and the institution-specific part in the same curriculum) of September 2013 continues to apply to students enrolled according to
this. This curriculum will be cancelled when the last student enrolled according to this graduates, although no later than 30 June 2017.

2. Admission to the degree programme
Students are admitted to this programme according to provisions of the Executive Order on Admission to Academy Profession and Professional Bachelor's Degree Programmes (see reference concerning the applicable Order in section 1.2):

Admission
Section 12. Pursuant to subsection (2), the educational institution determines how many applicants can be admitted to the individual degree programme, unless the admission capacity has been laid down by the Danish Agency for Higher Education.

(2) For degree programmes with open admissions, the institution must set an admission capacity which guarantees satisfactory educational conditions.

Section 13. Applicants with a Master's degree [kandidatuddannelse] may only be admitted to a degree programme if there are vacant places.

(2) Under special circumstances, the educational institution may grant exemptions from subsection (1).

Quotas
Section 14. In the event that there are more qualified applicants than study places in the individual admission area, see Section 12(1), the study places may be divided into quota 1 and quota 2 and, if necessary, quota 3. Surplus places from quota 1 are transferred to quota 2, and surplus places from quota 2 are transferred to quota 1. Quota 3 may only be established for degree programmes offered in English.

(2) Each year, the Danish Agency for Higher Education lays down the size of the quotas, including quota 3, upon recommendation from the educational institutions.

(3) The Agency may approve that institutions offering a degree programme apply a different admission system than the quota system.

(4) The institution publishes the distribution of study places determined pursuant to subsections (1), (2) and a different admission system, if any, pursuant to subsection (3) on its website.

3. Programme elements and modules
3.1. Figure 2: Scheduling of the programme elements, internship and exams
<table>
<thead>
<tr>
<th>Semester</th>
<th>Exam</th>
<th>ECTS</th>
<th>Assessment</th>
<th>Internal/external</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st semester</td>
<td>Initial assessment test</td>
<td>N/A</td>
<td>Pass/Fail</td>
<td>Internal</td>
</tr>
<tr>
<td>2nd semester</td>
<td>First-year exam</td>
<td>60</td>
<td>7-point grading scale</td>
<td>External</td>
</tr>
<tr>
<td>3rd semester</td>
<td>Programming</td>
<td>20</td>
<td>7-point grading scale</td>
<td>External</td>
</tr>
<tr>
<td></td>
<td>Systems Development</td>
<td>10</td>
<td>7-point grading scale</td>
<td>Internal</td>
</tr>
<tr>
<td>4th semester</td>
<td>Exam in elective element</td>
<td>30</td>
<td>7-point grading scale</td>
<td>Internal</td>
</tr>
<tr>
<td>5th semester</td>
<td>Internship exam</td>
<td>15</td>
<td>7-point grading scale</td>
<td>Internal</td>
</tr>
<tr>
<td></td>
<td>Main Exam Project</td>
<td>15</td>
<td>7-point grading scale</td>
<td>External</td>
</tr>
</tbody>
</table>

In addition to the above-mentioned exams, the student must participate in the compulsory prerequisite for the first semester. This is an internal indicative test that aims to give the student feedback and experience with the exam process. This test therefore does not attract any ECTS credits and will not figure on the exam certificate. Read more about the first semester exam in section 5.

### 3.2. Core areas

The degree programme comprises the following core areas:

- Programming (40 ECTS)
- System Development (25 ECTS)
- Technology (15 ECTS)
- Understanding Business (10 ECTS)

In total 90 ECTS credits

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**Core area: Programming**

**ECTS: 40**

**Contents**
The core area aims to qualify the student to effectively and professionally realise IT systems with relevant qualities, using state-of-the-art programming techniques and tools for software construction.

**Learning objectives**

**Knowledge**
The student has knowledge about:
- specification of abstract data types
- criteria for program quality
- abstraction mechanisms in modern programming languages
- integration between heterogeneous components and platforms

**Skills**
The student is able to:
- specify and construct algorithms
- use the programming language to realise algorithms, design patterns, abstract data types, data structures, design models and user interfaces
- assess the qualitative and quantitative properties of algorithms and data structures
- use a modern integrated development tool, including a version control system
- realise models in a database system and design programs that use a database interface
- design and create programs in the form of interrelated processes/threads.
- develop applications based on a layered software architecture
- use software components/libraries
- write documentation in compliance with de facto standards in the profession
- use modern techniques and tools to perform tests and quality control
- use techniques to structure programs with several simultaneous users
- design and structure programs based on interrelated processes in a distributed architecture
- structure programs that use state-of-the-art network technologies
- apply design patterns for distributed software architecture
- develop software components
- develop Web applications

**Competencies**
The student is able to:
- be part of development/integration/maintenance projects as a professional programmer
- acquire new skills in relation to programming languages, development tools, programming techniques and program design

### Core area: Systems Development

**ECTS: 25**

#### Contents
The core area aims to teach the student the necessary skills to participate professionally in the effective development of IT systems with relevant qualities.
The core area should moreover qualify the student to develop IT systems from idea to fully operational system, enhance and integrate IT systems in a systematic manner using modern system development methods and techniques as appropriate for the situation.

#### Learning objectives

#### Knowledge
The graduate has knowledge about:
- the importance of experiments as part of or as a supplement to the systems development method
- the importance of quality criteria for the systems development process and the final design of the system

#### Skills
The student is able to:
- model and design IT systems
- use an appropriate software architecture
- document and communicate product and process, including ensuring traceability
- assure the quality of product and process
- use appropriate design patterns
- involve users
- design user interfaces and choose a process model and systems development method as appropriate in the circumstances
- work systematically on a project using a selected system development method
- plan, assess and adjust a project
- select and use appropriate design patterns and components
- design systems that are integrated with other systems
**Competencies**
The student is able to:
- participate as a competent partner in a development project
- adjust a systems development method to a project in a manner appropriate to the situation
- participate as a competent partner in a development project
- learn new process models and system development methods
- reflect on and adjust processes and methods in practice.

### Core area: Technology

<table>
<thead>
<tr>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>The core area aims to qualify the student to contribute to the selection and application of technology in connection with systems development and programming of IT systems and give the student in-depth knowledge of technological aspects.</td>
</tr>
</tbody>
</table>

#### Knowledge
The student has knowledge about:
- the capabilities and design of state-of-the-art operating systems
- the capabilities and mode of operation of state-of-the-art database systems
- multiple-user problems
- principles relating to the design and realisation of distributed systems
- fundamental network concepts.

#### Skills
The student is able to:
- apply mechanisms for synchronising processes and threads
- apply key security-related concepts and threats
- use virtualisation
- use services and programming interfaces to communicate
- use common application protocols.

### Core area: Understanding Business

<table>
<thead>
<tr>
<th>Contents:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The core area aims to qualify the student to incorporate relevant business aspects and business understanding in connection with systems development.</td>
</tr>
</tbody>
</table>

The core area should moreover teach the student to work in a systems development organisation and participate in the development, enhancement and integration of IT systems for different types of organisations.

<table>
<thead>
<tr>
<th>Learning objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
</tr>
</tbody>
</table>

The student has knowledge about:
• how IT can improve business processes and develop the business
• common systems in the company concerned, including organisational concepts
• the rationale for IT investments
• IT security

Skills
The student is able to:
• analyse and model business processes
• participate in project work
• apply innovative methods focused on project work in practice-related development projects
• communicate internally and externally
• participate in IT implementation and change management

 Competencies
The student is able to:
• participate in and understand the connection between the design of business processes and the design of IT systems
• collaborate with representatives from the user organisation and the development organisation based on an understanding of the business
• acquire knowledge about new technology in a business context

3.3. Compulsory programme elements
The compulsory elements in the degree programme are:

• Programming, Systems Development, Technology and Business Understanding (60 ECTS)
• Programming and Technology (20 ECTS)
• System Development (10 ECTS)

In total 90 ECTS credits

The three compulsory programme elements are all completed with an exam.

Compulsory programme elements: Programming, Systems Development, Technology and Business Understanding

<table>
<thead>
<tr>
<th>ECTS: 60</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contents</strong></td>
</tr>
<tr>
<td>This first compulsory programme element aims to teach the student</td>
</tr>
</tbody>
</table>
- to efficiently and professionally design IT systems with user and database interfaces and master the basic components of computer science
- to develop and enhance small database systems from idea to fully functioning system on a systematic basis, using a specific state-of-the-art method and related system development tools
- to contribute to the selection and application of technology in connection with systems development and programming of IT systems as well as to give the student in-depth knowledge of technological aspects
- to incorporate relevant business aspects and business understanding in connection with systems development; to work in a systems development organisation and participate in the development, enhancement and integration of IT systems for different types of organisations.

### Learning objectives

#### Knowledge (programming)

The student has knowledge about:
- specification of abstract data types
- criteria for program quality
- abstraction mechanisms in modern programming languages

#### Knowledge (systems development)

The student has knowledge about:
- the importance of experiments as part of or as a supplement to the systems development method
- the importance of quality criteria for the systems development process and the final design of the system

#### Knowledge (technology)

The student has knowledge about:
- the capabilities and design of state-of-the-art operating systems
- the capabilities and mode of operation of state-of-the-art database systems
- multiple-user problems

#### Knowledge (understanding business)

The student has knowledge about:
- how IT can improve business processes and develop the business
- common systems in the company concerned, including organisational concepts
- the rationale for IT investments
- IT security

#### Skills (programming)

The student is able to:
- specify and construct algorithms
- use the programming language to realise algorithms, design patterns, abstract data types, data structures, design models and user interfaces
- use a modern integrated development tool, including a version control system
- realise models in a database system and design programs that use a database interface
- design and create programs in the form of interrelated processes/threads.
- develop applications based on a layered software architecture
- use software components/libraries
- write documentation in compliance with de facto standards in the profession
- use modern techniques and tools to perform tests and quality control
- assess the qualitative and quantitative properties of algorithms and data structures

**Skills (systems development)**
The student is able to:
- model and design IT systems
- use an appropriate software architecture
- document and communicate product and process, including ensuring traceability
- assure the quality of product and process
- use appropriate design patterns
- involve users
- design user interfaces

**Skills (technology)**
The student is able to:
- apply mechanisms for synchronising processes and threads

**Skills (understanding business)**
The student is able to:
- analyse and model business processes
- participate in project work
- apply innovative methods focused on project work in practice-related development projects
- communicate internally and externally
- participate in IT implementation and change management

**Competencies (programming)**
The student is able to:
- be part of development/maintenance projects as a competent programmer
- acquire new skills in relation to programming languages, development tools, programming techniques and program design

**Competencies (systems development)**
The student is able to:
- participate as a competent partner in a development project
- reflect on and adjust processes and methods in practice.

**Competencies (technology)**
The student is able to:
- acquire knowledge about new operating and database systems.

**Competencies (understanding business)**
The student is able to:
- participate in and understand the connection between the design of business processes and the design of IT systems
- collaborate with representatives from the user organisation and the development organisation based on an understanding of the business
- acquire knowledge about new technology in a business context

**Assessment**
The compulsory programme element concludes with an exam (the first-year exam). The exam is assessed according to the 7-point scale and totals 60 ECTS. The learning objectives for the programme element are identical to the learning objective for the exam. For information about the format and structure of the exam, see section 5.

## Compulsory programme element: Programming and Technology

<table>
<thead>
<tr>
<th>Details</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 ECTS credits from the Programming core area</td>
<td>10</td>
</tr>
<tr>
<td>10 ECTS credits from the Technology core area</td>
<td>20</td>
</tr>
</tbody>
</table>

### Contents

This second compulsory element aims to qualify the student.
- to master more advanced aspects of computer science and realise distributed software systems
- to contribute to the selection and application of technology in connection with systems development and programming of distributed IT systems as well as in-depth knowledge of technological aspects.

### Learning objectives

**Knowledge (programming)**
The student has knowledge about:
integration between heterogeneous components and platforms

**Knowledge (technology)**
The student has knowledge about:
principles relating to the design and realisation of distributed systems fundamental network concepts.

**Skills (programming)**
The student is able to:
use techniques to structure programs with several simultaneous users
design and structure programs based on interrelated processes in a distributed architecture structure programs that use state-of-the-art network technologies apply design patterns for distributed software architecture develop software components develop Web applications

**Skills (technology)**
The student is able to:
incorporate relevant technological aspects in the development of distributed systems including:
understand key security-related concepts and threats
**Competencies (programming)**
The student is able to:
- participate in integration projects as a professional programmer
- acquire new skills in relation to programming languages, development tools, programming techniques and program design

**Competencies (technology)**
The student is able to:
- reflect on the choice of infrastructure in connection with the development of distributed systems

**Assessment**
The compulsory programme element concludes with an exam (the exam in Programming). The performance is assessed according to the 7-point scale. The learning objectives for the programme element are identical to the learning objective for the exam.

For information about the format and structure of the exam, see section 5.

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### Compulsory programme element: Systems Development

<table>
<thead>
<tr>
<th>10 ECTS credits from the Systems Development core area</th>
</tr>
</thead>
</table>

**ECTS: 10**

**Contents**
This third compulsory programme element aims to qualify the student develop, enhance and integrate distributed IT systems in a systematic manner using modern systems development methods and techniques as appropriate for the situation.

**Learning objectives**

**Knowledge**
The student has knowledge about:
- the importance of quality criteria for the systems development process and the final design of the system

**Skills**
The student is able to:
- choose an appropriate process model and systems development method
- work systematically on a project using a selected system development method
- plan, assess and adjust a project
- document and communicate product and process, including guaranteeing traceability
- select and use appropriate design patterns and components
- design systems that are integrated with other systems

**Competencies**
The student is able to:
- adjust a systems development method to a project in a manner appropriate to the situation
- participate as a competent partner in a development project
- learn new process models and system development methods
- reflect on and adjust processes and methods in practice.

**Assessment**
The compulsory programme element concludes with an exam. The performance is assessed according to the 7-point scale. The learning objectives for the programme element are identical to the learning objective for the exam.

For information about the format and structure of the exam, see section 5.

### 3.3.1 Number of exams for compulsory programme elements

There is a total of three exams in the compulsory programme elements. See section 3.1.

### 3.3.2 Figure 3: The connection between ECTS credits for the core areas and the compulsory programme elements

<table>
<thead>
<tr>
<th>Compulsory programme elements</th>
<th>Programming, Systems Development, Technology and Business Understanding</th>
<th>Programming and Technology</th>
<th>Systems Development</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core areas</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understanding Business</td>
<td>10 ECTS</td>
<td></td>
<td>10 ECTS</td>
<td>10 ECTS</td>
</tr>
<tr>
<td>Systems Development</td>
<td>15 ECTS</td>
<td>10 ECTS</td>
<td>25 ECTS</td>
<td></td>
</tr>
<tr>
<td>Programming</td>
<td>30 ECTS</td>
<td>10 ECTS</td>
<td>40 ECTS</td>
<td></td>
</tr>
<tr>
<td>Technology</td>
<td>5 ECTS</td>
<td>10 ECTS</td>
<td>15 ECTS</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 3.4 Elective programme elements

**Elective programme elements**

<table>
<thead>
<tr>
<th>ECTS: 30</th>
</tr>
</thead>
</table>

**Contents**
The elective programme elements give the student an opportunity to enhance his/her academic and professional competencies by specialising and putting themes into perspective within the wider scope of information technology.

Every year, the programme offers a number of elective programme elements, which can be found on the Intranet. The elective programme elements may be offered by another ZIBAT Campus than the one the student is normally associated with. Elective programme elements may also be offered in the form of online/blended learning courses.

The student may also structure the elective programme elements as a theoretical and/or practical programme. The chosen programme must be approved by the programme manager.
Learning objectives

Knowledge
The student has knowledge about:
- the theory and practice of the chosen topics
- the relevance of the chosen topics in the context of information technology.

Skills
The student is able to:
- select, describe and search for literature concerning a problem of his/her own choice within the context of information technology
- discuss relevant processes and analytical approaches associated with the chosen topic(s)
- evaluate problems and outline solutions in relation to the chosen topic(s)
- communicate key results.

Competencies
The student is able to:
- familiarise himself/herself with new topics in the context of the theory and/or practices of the discipline without the assistance of others
- put the chosen topic(s) into a wider perspective and relate it/them to the other topics addressed during the programme.

Scheduling: 4th semester

3.5 Internship

Internship
Scheduling: 5th semester
ECTS: 15

Contents
The internship is organised so that it – when combined with the other parts of the programme – helps the student develop practical qualifications. The objective of the internship is to enable to the student to apply the methods, theories and tools taught by the programme when solving specific practical assignments in relation to information technology.

Learning objectives

Knowledge
The student has knowledge about:
- the day-to-day operations of the entire host company.

Skills
The student is able to:
- apply a variety of the technical and analytical approaches associated with employment within this industry
- evaluate practice-related problems and propose solutions
- structure and plan typical day-to-day tasks of relevance to the profession
- communicate practice-related problems and state reasons for the proposed solution(s).
### Competencies
The student is able to:
- manage development-oriented practical and professional situations as encountered in the industry
- acquire new knowledge, skills and competencies relevant to the profession
- participate in professional and interdisciplinary cooperation with a professional approach.

### Assessment
The internship concludes with an exam.
The learning objectives for the programme element are identical to the learning objective for the exam.
For information about the format and structure of the exam, see section 5.

### 3.6 Rules governing the internship
The internship allows the student to work with relevant professional issues within the programme's core areas and to gain knowledge regarding relevant work functions. The student is associated with one or more companies during the internship. The internship can be planned to allow both flexibility and differentiation and forms the basis of the student's final exam project.

The internship is intended to be equivalent to a full-time job with the same requirements in terms of working hours, performance, commitment and flexibility that a fully trained computer scientist should expect to face in his/her first job.

During the internship, the student is supported by an internship tutor from the programme and a contact person within the company. Based on the learning objectives for the internship, cf. the national part of the curriculum, the host company and the student together define the goals for the student's learning outcome from the internship and subsequently these will serve as guidelines for how the company organises the student's work.

The internship concludes with an internship report.

Generally, the internship is equivalent to a standard job as regards the required performance, commitment and flexibility that a fully trained computer scientist should expect to face in his/her first job.

### 3.7 Ways of teaching and working
The tuition given in the Computer Science programme is a dynamic, interactive process with the main emphasis on active participation by the students. The tuition is based on relevant business practices and combines theory and practice. Relevant problems from different types of companies in the IT industry are included. The students are responsible for their own learning and both students and teachers alike contribute constructively to the learning process.
In order to ensure optimum academic learning and personal development for each student, the Computer Science programme applies various pedagogical approaches, with the main emphasis on dialogue, discussion and project work.

The tuition is varied and comprises lessons in class, guest lectures, company visits, project work in groups and individualised work – often in an interdisciplinary context and always with a focus on the usability aspect. In addition to academic skills, the different ways of learning help the students develop their abilities to work on their own and together with others.

Common to all of these activities, we always strive to define (or help to define) clear objectives for the learning.

The tuition can be organised to include foreign languages in the form of educational material and the actual tuition.

3.8 Differentiated teaching
The teaching is organised to allow for individual learning styles and different specialisations.

3.9 Reading texts in foreign languages
Parts of the teaching material used in the programme may be in English and some classes may be taught in English.

Knowledge of additional foreign languages is not required, beyond the requirements laid down in the Executive Order on Admission.

4.1 Internationalisation
4.1 Studies abroad
The way the degree programme is structured, in the 4th semester the student can study the electives or produce his/her main project abroad, and likewise international students can study a semester of the programme abroad.

Similarly, the internship can take place abroad, and students may also engage in summer schools abroad as an elective.

Contact the international office of the educational institution for further details about specific options.

Examinations when studying the 4th semester abroad
The student must sit his/her exams at the partner institution abroad. The student must also document the learning outcome from the subjects studied at the partner institution.
online in a portfolio. The student writes a report for each subject describing the learning outcome of the subject.

The report must have an extent appropriate for the credits awarded for the subject(s), as a minimum three standard pages of 2400 characters per page.

All assignments and their answers must be documented online in the portfolio. Links to the portfolio and the documentation substantiating exam(s) passed at the partner institution must be submitted to the original educational institution at the latest four weeks after completing the exams abroad. The portfolio, including the reports on the learning outcome, is given a Pass or a Fail.

ZIBAT awards 30 ECTS credits from the 4th semester in the form of specialisation with a separate exam in order to provide students with optimum opportunities to organise studies abroad. Further details can be found in the section “Elective element: Specialisation”.

4.2 Agreements with foreign educational institutions about parallel studies
Information about partner institutions, international internships, credit transfer and procedures are published regularly by the Zealand Institute of Business and Technology.

5 Tests and exams
All programme elements conclude with an exam where marks are given according to the 7-point scale. See section 5.1.2 on compulsory prerequisites for a description of the conditions that students must comply with to sit an exam and complete the programme.

Electronic submission of exam papers
Electronic submission of exam papers may be required.

Rules for electronic submission on Fronter after written exams
- Before the written exam, you will receive a message at your @edu.easl.dk e-mail with a link to the written exam in WISEflow. When you arrive in the examination room, you log on to WISEflow under the submission folder created for the exam concerned. You upload your answer to this folder as described below. You must upload your answer to WISEflow before time for the exam is up.
- The exam paper must be submitted in PDF format. Additional material may also be submitted in other file formats.
- In the event of technical difficulties with the submission, you may contact the invigilators up until the deadline for submission.
• An answer not submitted while the submission folder is open will be regarded as **not submitted**. In this case, you will have used one examination attempt.

**Submission of assignments, reports, etc. in WISEflow**
• Click on the submission folder in the indicated place on Fronter.
• For individual submissions, click on the 'Upload fil' (Upload file) button and select the file to be uploaded. Then press "Aflever" (Submit).
• For group submissions, first tick the names of yourself and the other students in your group and then click on the "Foretag aflevering på vegne af" (Submit on behalf of) button and select the file to be uploaded.

**Before the exam**

**Registration**
From the very start of a semester you are automatically registered for the tests and exams scheduled for the semester concerned – also the relevant re-exams.

If you fail an exam or are away sick, you must sit a re-exam, which normally takes place a couple of weeks later.

If you did not pass a re-exam or failed to show for the exam/re-exam for which you were registered, you are automatically registered for the next ordinary exam in the subject in question. This means that if you fail to show for an exam, you are not entitled to sit the next re-exam but will have to wait for the next ordinary exam.

To be able to sit the exam, you must have complied with the semester's requirements to completion of compulsory study activities, submissions, participation in class, etc.

It is your responsibility to stay informed about the exam dates. You can find information about exams and attendance rosters on ZIBAT’s Intranet.

**Cancellation**
It is not possible to cancel participation in an exam or re-exam (but see the section on illness/absence).

**Information on the exam and attendance rosters**
ZIBAT prepares information on the exam for each programme. It contains information about the exam periods, whether the exam is oral or written, dates of submission as well as any written assignments and similar.

Information on the exam is published mid-April for the spring semester and mid-October for the autumn semester. You can find information on the exam on notice boards and on ZIBAT’s Intranet.
Later in the semester, ZIBAT prepares an attendance roster for each exam, which contains practical information about:

- The date and time of the exam, including the expected date of a re-exam.
- Rooms
- Form of examination:
- Names of the internal and external examiners
- Name of the person responsible for the exam in question
- Contact details for the programme administration (to be used for reporting ill, etc.)
- Submission of written assignments etc. before the exam, if applicable.
- Any special conditions such as the use of IT, Internet access, aids, etc.
- When the results of the written exams will be available in WISEflow (under "Arkiv" (Archive)) and on ums.eaj.dk (under "Karakterer" (Marks)).

The attendance rosters will be available on ZIBAT’s Intranet approximately 14 days before the exam.

It is your own responsibility to stay informed about both the "Information on the exams" and the attendance rosters.

**Arrive early**

Arrive at the exam well ahead of the scheduled time – at least 15 minutes early. For written exams you must be at your seat and ready 10 minutes before the exam is scheduled to start.

If you arrive late for the exam, you may be barred from entering. Please note that failure to attend an exam counts as one examination attempt (see below under "Re-exam"). If you have a good reason for being late, the person responsible for the (written) exam may decide whether to let you in. Being late for an exam does not entitle you to additional time for that exam.

Similarly, the examiner at an oral exam may decide whether you can be examined at a later time during the exam in question (the same day).

If you submit a report/a product after expiry of the fixed deadline, you will be excluded from the exam in question. Please note that late submission of a report/a product counts as one examination attempt (see below under “Re-exam”). The same applies to submission of written work of other products that form the basis of an exam but are not included in the assessment.

**Remember to bring photo ID**

You must prove your identity at all exams by producing a photo ID (primarily student card, but otherwise driver’s licence or passport). The invigilators and examiners do not know you!
5.1 Exams
The scheduling and scope of the exams are shown in Figure 2 in section 3.1. The mark of 02 is required to pass an exam.

5.1.1 Types of exams
The degree programme comprises a number of different types of exams that reflect the content and work methods used in the programme.

5.1.2 Compulsory prerequisites
Compulsory prerequisites are conditions with which the student must comply to sit the exam and complete the degree programme. See also section 6.3 on the criteria for assessment of study activity.

<table>
<thead>
<tr>
<th>Compulsory prerequisites: First-year exam</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prerequisites for sitting the exam:</strong></td>
</tr>
<tr>
<td>To sit the first-year exam, the student must complete an exam, the first semester exam.</td>
</tr>
</tbody>
</table>

_The first semester exam_

_The first semester exam is an exam in the first semester subjects. This is an internal, indicative exam, which does not attract any ECTS credits._

_It is a condition for sitting the exam that the student has completed the compulsory study activities. The study activities are described in the semester plan by the course teachers._

_The exam is an internal, individual oral exam based on two questions that the student draws at the exam. There is no preparation time for the exam, and the examination time is 20 minutes, including assessment. All exam questions will be given to the students at least one month before._

_Marks will be awarded individually according to the 7-point scale. The mark is not shown on the exam certificate, as the exam is intended to give the student feedback and experience with the exam process. You can read more about the first semester exam on the programme's communication platform._

The first-year project, which is used both for the first-year exam and the assessment, must comply with the formal requirements, cf. below, and must be submitted on time, cf. the submission date on the Intranet.

- Cover page and title
- Introduction
- Main section
• Conclusion
• References
• Appendices (only appendices of key importance to the report)
• Indication of path to the version management server, where the source code and the executable code for the product can be found (if available)
• All students must sign the project and state the sections for which they are responsible.

Failure to comply with one or more study activities or to correctly submit the first-year project, which constitutes the written part of the exam, has the effect that the student cannot sit for the exam and he/she will have used one attempt.

Compulsory prerequisites: The exam in the compulsory programme element Programming and Technology
Prerequisites for sitting the exam:

• Only students who have passed the first-year exam may continue their studies in the third semester or later.
• There are four study activities linked to the exam, all specified in the semester schedule.
• Students who have not completed the four study activities may not sit for the exam and will have used one attempt.

Compulsory prerequisites: The exam in Systems Development
Prerequisites for sitting the exam:

The students submit a systems development report, which is used for the examination. The report must be a group report with no more than five students in each group. The written product, the systems development report, which is the point of departure of the exam, must comply with the formal requirements as set out below and must be submitted in time, cf. the exam schedule available on the Intranet.

• Cover page and title
• Introduction
• Choice of method
• Main principles of planning and quality assurance
• Quality criteria and architecture
• Reflections on methods and their use in practice
• Conclusion
• Any appendices

No more than 30 standard pages. A standard page contains 2,400 characters including spaces and footnotes. Cover page, table of contents, references and appendices are not included.
Failure to comply with these conditions has the effect that the student cannot sit for the exam and has used one attempt.
Compulsory prerequisites: The exam in elective programme elements

Prerequisites for sitting the exam:

- The student must prepare a synopsis to be used as the point of departure for the oral exam. The synopsis must comply with the formal requirements as set out below and must be submitted in time, cf. the exam schedule available on the Intranet.

Formal requirements to the synopsis:
- Reason(s) for choosing the topic
- Sources
- Outline
- References (including all sources referred to in the project)
- Appendices (only appendices of key importance to the report)

The synopsis may be no more than 10 standard pages plus any programs and a running system. A standard page contains 2,400 characters including spaces and footnotes. Cover page, table of contents, references and appendices are not included. Appendices are not subject to assessment.

Compulsory prerequisites: Internship exam

Prerequisites for sitting the exam:

- An internship report, which is used both for the assessment and the examination, must comply with the formal requirements, cf. below, and must be submitted on time, cf. the exam schedule on the Intranet.

Failure to comply with one or more study activities or to correctly submit the internship report, which constitutes the written part of the exam, has the effect that the student cannot sit for the exam and he/she will have used one attempt.

Compulsory prerequisites: Exam in the final exam project

Prerequisites for sitting the exam:

- The students must have passed all exams in the programme prior to this.
- The written project, which is used both for the assessment and the examination, must comply with the formal requirements to the final exam project, cf. the national part of the curriculum, and must be submitted on time, cf. the exam schedule on the Intranet.
- For formal requirements to the final project, reference is made to the main project manual to be found on the Intranet.

Failure to correctly submit the written project, which constitutes the written part of the exam, has the effect that the student cannot sit the exam and has used one attempt.

5.1.3 Exam structure

Below is an overview of the exams under the programme, describing the formal requirements and assessment.
Exam structure: First-year exam

<table>
<thead>
<tr>
<th>60 ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>The exam is an external, individual oral exam based on a written group project and assessed according to the 7-point scale. The group can comprise no more than five students.</td>
</tr>
<tr>
<td>A single mark will be given based on a general assessment of the written product and the oral performance.</td>
</tr>
<tr>
<td>The project group will be given 10 minutes per student for the presentation, up to max 30 minutes. Following this, the individual members of the group will be subjected to individual examination. Each student is allocated 20 minutes including assessment.</td>
</tr>
<tr>
<td>The project report may not exceed 40 standard pages. A standard page contains 2,400 characters including spaces and footnotes. Cover page, table of contents, references and appendices are not included in the required number of pages. Appendices are not subject to assessment. Failure to comply with these conditions has the effect that the student cannot sit for the exam and has used one attempt.</td>
</tr>
</tbody>
</table>

Examination language: Danish/English

Assessment criteria

The assessment criteria for the exam = the learning objectives for the compulsory programme elements: Programming, Systems Development, Technology and Business Understanding The learning objectives can be found in the national curriculum.

Scheduling

The exam is scheduled for the end of the second semester. Details about time and place and about submission of the written group project can be found on the Intranet. The exam must be passed by the end of the first year of studies in order for the student to continue his/her studies. The programme may grant students an exemption from the stipulated deadlines for passing the exams, if necessary as a result of illness, childbirth or unusual circumstances.

Exam structure: The exam in the compulsory programme element Programming and Technology

<table>
<thead>
<tr>
<th>20 ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>The exam is an external, individual exam where the student works with programming and technology during the 4-6 hour examination period. Students may not leave the examination room before the time is up. The internal and the external examiners will ask questions while the students sit in the examination room working on the assignment. The students will be given their assignments at the beginning of the exam.</td>
</tr>
<tr>
<td>The assignment will be composed by the internal examiner and will comprise theoretical and practical elements from the core areas Programming and Technology. At the end of the exam the student will be awarded a single mark according to the 7-point scale.</td>
</tr>
</tbody>
</table>

Use of aids

All electronic aids are permitted. Communication with parties other than the internal and the external examiners is not allowed during the exam.

Examination language: Danish/English

Assessment criteria
The assessment criteria for the exam = the learning objectives for the compulsory programme element: Programming and Technology in the third semester. The learning objectives can be found in the national part of the curriculum.

**Scheduling**
The exam is scheduled for the end of the third semester. Details about time and place can be found on the Intranet.

### Exam structure: The exam in Systems Development

#### 10 ECTS

The exam is an oral exam based on a written project and assessed according to the 7-point scale. Marking is individual. A single mark will be given based on a general assessment of the group’s written product and the performance of the individual student during the oral exam.

The project group will be given 10 minutes per student for the presentation, up to max 30 minutes. Following this, the individual members of the group will be subjected to individual examination. Each student is allocated 20 minutes including assessment.

**Assessment language:** Danish/English

**Assessment criteria**
The assessment criteria for the exam = the learning objectives for the compulsory programme element: Systems Development

The learning objectives can be found in the national curriculum.

**Scheduling**
The exam is scheduled for the end of the third semester. Details about time and place can be found on the Intranet.

### Exam structure: Exam in the elective element

#### 30 ECTS

The exam is an internal, individual oral exam based on a synopsis and assessed according to the 7-point scale. The student is free to choose the topic of his/her synopsis.

A single mark will be given based on a general assessment of the written product and the oral performance with the synopsis weighing 20%.

The student presents the synopsis, max 10 minutes. The presentation is followed by an individual examination period of 20 minutes, including evaluation and awarding of marks.

**Assessment language:** Danish/English

**Scheduling**
The exam is scheduled for the end of the fourth semester. Details about time and place and about submission of the written group project can be found on the Intranet.

### Exam structure: Internship exam

#### 15 ECTS

The exam is an internal, individual written exam based on an internship report assessed according to the 7-point scale.

The internship report is assessed by the student's internship tutor in consultation with an internal examiner. A single mark is awarded based on an assessment of the written product.
Formal requirements to the internship report
- Cover page stating name, host company, educational institution and internship period
- Short description of the company
- Reflections on the fulfilment of the specific learning objectives
- Description of specific tasks
- Reflection on the completion of the scheduled internship
- Conclusion
- Appendix: Internship schedule, company reference and logbook
- Any additional appendices (only appendices of core importance to the report)

The internship report must not exceed 10 standard pages plus appendices. A standard page contains 2,400 characters including spaces and footnotes. Cover page, table of contents, references and appendices are not included. Appendices are not subject to assessment.

Failure to comply with these conditions has the effect that the student cannot sit for the exam and has used one attempt.

Examination language: Danish/English

<table>
<thead>
<tr>
<th>Assessment criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>The assessment criteria for the exam = the learning objectives for the internship.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scheduling</th>
</tr>
</thead>
<tbody>
<tr>
<td>The exam takes place after completion of the internship. Details about time and place and about submission of the internship report can be found on the Intranet.</td>
</tr>
</tbody>
</table>

---

**Exam structure: Exam in the final exam project**

**15 ECTS**

The exam is an external, oral exam based on a written project.

A single mark will be given based on a general assessment of the written product and the oral performance. In the assessment, the internship report carries a weight of 70% and the individual oral performance a weight of 30%. The exam is assessed according to the 7-point scale.

The group can comprise no more than four students. The project group will be given 10 minutes per student for the presentation, up to max 30 minutes for groups. This is followed by individual examinations. Each student is allocated 20 minutes including assessment.

Examination language: Danish/English

<table>
<thead>
<tr>
<th>Assessment criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>The assessment criteria are the learning objective of the exam = the learning objectives for the final exam project, cf. section 5.5.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scheduling</th>
</tr>
</thead>
<tbody>
<tr>
<td>The exam is scheduled for the end of the fifth semester. Details about time and place can be found on the Intranet.</td>
</tr>
</tbody>
</table>

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5.1.4 Externally assessed exams

For a list, please see section 3.1.
5.2 Time of exams during the programme
For a list, please see section 3.1.

5.3 First-year exam
The first-year exam must be passed before the student completes the first year of studies in order for the student to continue in the degree programme.

See the reference to the applicable Executive Order on Tests and Exams in Vocational Programmes in section 1.2.

5.4 Requirements to written assignments and projects
See the description under the individual exam in section 5 and see section 6.3 on the criteria for assessment of study activity.

5.4.1 Special rules for written exams
- Any draft paper you may need will be handed out by ZIBAT. You are not allowed to use your own paper.
- You must remain calm during the exam and avoid disturbing other students
- If you need to leave the exam room during the exam, you must do so under supervision.
- When you have finished your exam paper, you must remain in your seat until your answer has been uploaded correctly to WISEflow.
- You are not allowed to leave the exam room within the last 30 minutes before the end of the exam, even if you have already handed in your answer
- No exam papers or answers (including drafts) may be removed from the exam room until the exam is over.

5.5 Requirements to the Main Exam Project
The objective of the Main Exam Project is to document the student’s understanding of practice and key theories and methods in relation to a practice-related issue based on a specific assignment within the subject matter covered by the programme. The issue to be addressed must be a key issue within the programme and the profession and the student should preferably formulate it jointly with a public or a private company. The issue to be addressed is subject to the institution’s approval. The student must submit a project report as well as a product, if relevant.

The project report, which constitutes the written part of the exam, must as a minimum contain the following:

- Cover page and title
- Table of contents
- Introduction, including problem statement
- Main section
• Conclusion
• References (including all sources referred to in the project)
• Appendices (only appendices of key importance to the report)

The project report may not exceed 20 standard pages + 20 standard pages per student.

Cover page, table of contents, references and appendices are not included in the required number of pages. Appendices are not subject to assessment.

A standard page contains 2,400 characters including spaces and footnotes. Cover page, table of contents, references and appendices are not included. Appendices are not subject to assessment.

Learning objectives
The final exam project must document that the student has reached the required level for graduation, cf. section 1.5.

Assessment
The exam is an external exam assessed according to the 7-point scale. The exam comprises a project and an oral part. One combined mark is given. The exam cannot take place until the student has passed the final internship exam and all other exams in the degree programme.

For information about the format and structure of the exam, see section 5.

5.5.1 The importance of spelling and writing skills for the assessment
Spelling and writing skills are included in the assessment of the Main Exam Project. The mark reflects a general assessment of the academic contents and the student’s ability to spell and use appropriate wording.

Students who can document a relevant disability can apply for an exemption from the requirement that spelling and writing skills are included in the assessment. An application must be sent to the programme manager at the latest four weeks before the exam is due to be held.

5.6 Use of aids
All aids are permitted, unless otherwise expressly stated for the exam concerned.

5.7 Special exam conditions
Students may apply for special exam conditions if warranted by physical or mental impairment. Applications must reach the programme administration at the latest four weeks before the exam. Exemptions from the deadline for application may be granted in the event of sudden health issues. A medical certificate, a statement from for
example a body dealing with speech, hearing or sight impairment, dyslexia, or other forms of documentation must be enclosed with the application documenting health issues or specific relevant functional impairment.

Students with mother tongues other than Danish may apply for permission to bring dictionaries to exams where aids are otherwise not permitted.

The application for permission to bring other aids to an exam must be submitted to the programme at the latest four weeks before the exam.

5.8 Re-examinations

Re-examination due to illness
A student who is prevented from sitting an exam due to ill health must immediately inform the programme administration.

A student who was prevented from sitting an exam due to documented illness or other unforeseeable reason (force majeure) is allowed re-examination as soon as possible. If the exam is scheduled for the final exam period of the programme, the student will be given an opportunity to sit the exam within the same exam period or immediately after.

The re-exam may be identical to the next ordinary exam.

Information about time and place of re-exams can be found on the department’s communication platform.

Illness must be documented by a medical certificate\(^1\). The educational institution must receive the medical certificate at the latest eight working days after the exam took place. A student who is taken acutely ill during an exam must document that he/she was ill on the day concerned.

If illness is not documented as laid down above, the student has used one attempt at sitting the exam.

Illness (during the exam)
If you fall ill during an exam, you must immediately notify the examiner or invigilator, who will pass on the information to the programme administration. An exam disrupted due to illness does not count as an examination attempt, provided you submit a medical certificate to the programme administration no later than eight days from the date of the exam. (The costs involved are for your own account). Upon receipt of your medical certificate, the programme administration will register you for a re-exam, which normally takes place shortly after the ordinary exam. The exact time of the re-exam is shown in the attendance roster for the exam in question.

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\(^1\) Any costs incurred to procure the required documentation must be paid by the student.
If the programme administration does not receive a medical certificate from you within the stipulated deadline, the disrupted exam will count as one examination attempt.

The same procedure and rules apply if you fall ill during a re-exam- However, in that case you will be registered for the next ordinary exam.

Re-exam
In the event of failure to pass an exam or non-attendance at an exam, the student is automatically registered for re-examination, provided the student has any attempts left. The re-exam may be identical to the next ordinary exam.

It is up to the student to find out when the re-exam will take place.

Information about the time and place of re-exams can be found on the department’s communication platform.

The programme manager may grant exemptions from the continued registration procedure if warranted by unusual circumstances, including documented disability.

5.9 Language used in the exams

Examination language
Exams must be answered in Danish/English with a proficiency that can be understood.

5.10 Initial assessment test
In addition to the subject-specific exams in the degree programme, the Zealand Institute of Business and Technology organises an initial assessment test.

Students must sit for the initial assessment test no later than two months after the programme started, and they must receive the results at the latest two weeks after the test. If a student fails this test, he/she may re-sit the test which will be repeated within three months from the start of the programme. A student has two attempts to pass the initial assessment test. Information about the rules and the content of the test is available on the Intranet.

Answers are given a pass/fail. It does not attract any ECTS credits.

As far as appeals are concerned, the rules that apply to normal exams do not apply to the initial assessment test. For this test, it is only possible to appeal about legal aspects of the test, i.e. any rights you may have regarding the initial assessment test as set out in the Examination Order (see reference to the relevant Executive Order in section 1.2).

Examples of legal aspects are if the test must be held within one month of the commencement of the programme and that you only have two examination attempts.
5.11 Cheating at exams
When handing in a written answer, students must sign to confirm that the answer was completed without undue assistance.

5.11.1 Using one's own work and that of others (plagiarism)
Cheating in exams through plagiarism comprises instances where a written answer is presented as if completely or partially produced personally by the student(s), although the answer:

- comprises identical or almost identical repetitions of the wording or work of others, without clearly stating the source, cf. the institution’s requirements to written work.
- comprises major pieces of text with wording so close to that of another piece of writing or similar wording etc. that when comparing the texts it is obvious that the text pieces could not have been written without the use of the other source.
- comprises the use of words or ideas of others without referencing these originators in an appropriate manner
- re-uses text and/or key ideas from the student’s own previously assessed answers without stating the source.

Presumed cheating at an exam, including plagiarism during and after the exam
The programme manager will be notified if during or after an exam there is a presumption that a student:

- has received or given unauthorised help,
- has presented the work of another person as his/her own (plagiarism), or
- has used his/her own previously assessed work or parts thereof without referring to it (plagiarism).

5.11.2 Investigation of cheating offences in exams, including plagiarism

Postponement of the exam
If the cheating concerns plagiarism in a written report and/or answer which is used in the assessment of a subsequent oral exam, the programme manager postpones the exam, unless the issue can be resolved before the date set for the exam.

Form and content of the report
Reporting must be made without undue delay. The report must be accompanied by a written description of the breach, comprising information that can identify the individuals reported on in addition to a brief summary and the documentation substantiating the matter. In the event of repeated offences, involving one or more people, this must be stated.
When reporting on plagiarism, the plagiarised parts must be marked with clear reference to the sources of the plagiarised content. Similarly, the plagiarised text must be marked in the source text.

**Involving the student – hearing of the party(-ies)**

The programme manager decides whether the hearing of the student should be oral, in writing or a combination thereof.

For the oral hearing, the student is summoned to an interview with the purpose of clarifying the matter in order to present the documentation substantiating the presumed cheating in the exam to the student and to hear his/her point of view. The student has the right to be accompanied by a person of his/her own choice.

For the written hearing, the documentation substantiating the presumed cheating in the exam is forwarded in order to ask the student to make a written statement of his/her point of view.

### 5.11.3 Disciplinary measures for cheating offences and disruptive behaviour

If the clarification of the matter confirms the presumed cheating offence to the programme manager and the action has or would have affected the assessment, the programme manager expels the student from the exam.

In less serious cases, the student will first be given a warning.

Under aggravating circumstances, the programme manager may expel the student for long or short periods of time. In such cases the student receives a written warning to the effect that repeated offences may lead to permanent expulsion.

Expulsion results in cancellation of any marks that may have been awarded for the exam concerned, and the exam will count as one attempt.

The student cannot sit a re-exam and can only sit the exam when the next ordinary exam in the degree programme is scheduled.

Under aggravating circumstances, the programme manager may decide to expel the student from the educational institution for a short or long period of time. In such cases the student receives a written warning to the effect that repeated offences may lead to permanent expulsion.

During a period of expulsion the student may not attend classes or exams.

The programme manager may grant an exemption.

### 5.11.4 Complaints about sanctions for cheating, plagiarism or disruption of an exam
The decisions that an attempt at the exam has been used and expulsion due to a cheating offence at an exam are final and complaints cannot be brought before a higher administrative authority.

Complaints concerning legal aspects (such as incapacity, hearing, complaints/appeals instructions, the interpretation of the Examination Order etc.) may be brought before the Danish Agency for Higher Education and Educational Support. The complaint is forwarded to the educational institution, for the attention of the programme manager. The manager makes a statement which the complainant must be given time to comment on, normally one week. The educational institution forwards the complaint, the statement and any comments that the complainant may have made to the Danish Agency for Higher Education and Educational Support. Complaints must reach the educational institution at the latest two weeks from the day the complainant was notified of the decision, cf. Section 51 of the Examination Order.

6 Miscellaneous rules applicable to the programme

6.1 Rules governing the duty to attend
Please see section 6.3 on the criteria for assessment of study activity.

6.2 Merit

6.2.1 Credit transfer arrangements for courses covered by the national part of the curriculum
Successfully completed programme elements are equivalent to the same programme elements taught at other educational institutions offering the same degree programme.

The student is obliged to provide information about any programme elements completed at other Danish or foreign institutions of higher education and about any past employment that may qualify for credits. The educational institution approves credits on a case-by-case basis based on successfully completed programme elements and any employment equivalent to subjects, programme elements and internship elements. The decision will be based on an academic assessment.

Advance credits
Students may apply for advance credits. A student who has obtained advance approval of a study period in Denmark or abroad is obliged to document the courses completed during the approved study period at the end of the period. In connection with the advance approval, the student must grant the institution the right to collect the necessary information upon completion of the studies abroad.

If advance credits are awarded, the course is considered to have been completed, provided it was passed in accordance with the rules for the programme in question.
6.2.2 Credit transfer arrangements for courses covered by the institution-specific part of the curriculum

Elective programme elements that a student has passed are equivalent to similar programme elements taken at other educational institutions offering this degree programme as well as other degree programmes.

Advance credits

Students may apply for advance credits, provided the student has completed programme elements that award credit, whether or not they are offered in the programme.

6.3 Criteria for assessment of study activity

Studying for a degree at ZIBAT is comparable to being in the labour market. Like any other place of work, the students must therefore attend all scheduled tuition and any other study activities. Absence is noted – and in the event of excessive absence, the student will be summoned for an interview to discuss this in order to reduce the absence as fast as possible.

Study activity in the Computer Science programme

- Attendance is compulsory and records are kept.
- If a student's absence exceeds 15%, the student will be evaluated to determine his/her level of study activity.
- Attendance in the internship host company is compulsory in the fifth semester, and an internship logbook will be kept.
- The student must be able to document contact with a tutor in the fifth semester.
- The absence percentage is evaluated three times per semester.

The first time a student is given the rating of inactive, he/she is notified by the student counsellor (via e-mail or telephone).

The second time a student is given the rating of inactive, he/she receives a written warning from the programme administration.

After receipt of the written warning, the student must actively state whether he/she wants to keep his/her place stating how the student intends to secure his/her study activity level in the future.

Compulsory assignments/prerequisites

Compulsory prerequisites are the study activities described by the teacher of the subject. These must be completed and approved before the student can be accepted for the exam. If a student does not comply with the prerequisites, the student cannot sit for the exam and has used an attempt.

- The teacher organises the compulsory assignments/prerequisites.
• The teacher follows up on any students who do not attend or fail, or who for some other reason do not comply with the compulsory prerequisites. A student may re-submit answers to compulsory assignments once.
• The teacher notifies the student counsellor and the programme manager of any assignments/prerequisites not complied with.

A compulsory assignment is an assignment that must be submitted by the student in order to be considered an active student. If the assignment involves an oral presentation, the student has the duty to attend.

**Termination of enrolment**
Enrolment may be terminated for students who have not been active for a consecutive period of at least 12 months.

Periods when the student has not been active due to leave, childbirth, adoption, documented illness or conscription will not be included. Upon request the student must produce documentation substantiating these circumstances.

The Academy may grant exemptions from these provisions in the event of unusual circumstances. The application for exemption is sent for the attention of the programme manager.

Before actual termination of enrolment the student is notified in writing. In this connection the student will be made aware of the above provisions. The notice to the student must state that the student has 14 days to submit documentation substantiating that periods where the student has not been active should not be included as well as the deadline for an application for exemption.

If the student fails to react within the stipulated deadline, his/her enrolment is terminated.

If the student pleads that enrolment should not be terminated, the termination awaits the programme manager’s final decision.

The student may complain to the programme manager about the decision within two weeks of receiving the decision. The complaint has a delaying effect. If the manager upholds the decision, the student may appeal to the Ministry within two weeks of receiving the decision as regards legal aspects.

**6.4 Exemption rules**
The educational institution may grant an exemption from the provisions of the national part of the curriculum when warranted by unusual circumstances. The institutions work together to ensure uniform exemption practices.

When special conditions warrant it, the educational institution may grant an exemption from rules in the curriculum defined by the educational institution concerned or other educational institutions.
6.5 Complaints

Complaints about exams
The student is recommended to ask the student counsellor for guidance on complaints procedures and how to prepare a complaint.

The rules governing complaints about exams can be found in chapter 10 of the Examination Order.

The Examination Order differentiates between complaints concerning:

- the scope of the examination etc., the examination procedure and/or the assessment and
- complaints about legal matters.

The two types of complaints are treated differently.

Complaints about the scope of the examination etc., the examination procedure and the assessment
A student may submit a written complaint, stating his/her reasons, within two weeks after the assessment was communicated in the usual way, concerning:

- the scope of the examination, including questions asked, work submitted etc., and the exam relative to the objectives and demands of the programme
- the examination procedure
- the assessment.

The complaint may concern all exams, including written, oral and combinations thereof, as well as practical or clinical exams.

The complaint should be submitted to the programme manager.

The original examiners, i.e. the internal examiner and the external examiner of the exam concerned, must be presented with the complaint immediately. The educational institution must be able to form its decision in relation to academic issues based on the statement from the examiners. Normally, the educational institution allows two weeks to make the statements.

As soon as the examiners’ statements are available, the complainant is given an opportunity to comment on the statements, normally within one week.

The educational institution makes decisions regarding complaints based on the statement made by the examiners and the complainant’s comments to the statement, if any.

The decision, which must be in writing, stating reasons, may involve:

- an offer for a new assessment (re-assessment) – although only in the case of written exams
- an offer for a new exam (re-examination)
that the decision is not in favour of the student.

If the decision is to offer re-assessment or re-examination, the programme manager appoints a review panel. Re-assessment applies only to written exams where material is available for assessment, as the review panel cannot (re-)assess an oral exam that has already been held, and as the notes made by the original examiners are personal and cannot be divulged.

If the decision is to offer re-assessment or re-examination, the appellant must be told that re-assessment or re-examination may lead to a lower grade. The student must accept the offer within two weeks from the day the decision was communicated. The acceptance cannot be withdrawn. If the student does not accept within this period of time, there will be no re-assessment or re-examination.

Re-assessments or re-examinations must take place as soon as possible.

For re-assessments the case documents must be made available to the review panel, viz. the assignment, the answer, the complaint, the statements made by the original examiners with the complainant’s comments as well as the educational institution’s decisions.

The review panel notifies the educational institution of the outcome of the re-assessment and encloses a written statement with the reasons and the actual assessment. Re-assessments or re-examinations may produce lower marks.

If the decision is to offer a re-assessment or re-examination, this decision applies to all students, provided their exam suffers from the same defects as those referred to in the complaint.

The complaint is sent to the programme manager at the latest two weeks (14 calendar days) after the assessment of the exam concerned was communicated. If the deadline expires on a public holiday, the due date will be the first working day following the public holiday.

Exemptions from the deadline can be made in the event of unusual circumstances.

6.5.1 Appeal

As regards academic issues, the complainant can lodge an appeal for educational institution’s decision with an appeals panel. The activities of the appeals panel are governed by the Public Administration Act; this also includes incapacity and confidentiality.

The appeal should be submitted to the programme manager.

Appeals must be lodged at the latest two weeks after the student was informed of the decision. The above-mentioned requirements to complaints (in writing, stating reasons etc.) also apply to appeals.
The appeals panel consists of two authorised external examiners, who are appointed by the chairman of the external examiners, a lecturer authorised to conduct examinations and a student studying the subject area (the degree programme), both of which are appointed by the programme manager.

The appeals panel makes decisions based on the material that the educational institution used for its decision and the student’s appeal, stating the reasons for the appeal.

The appeals panel considers the appeal, and the decision may result in:

- an offer for re-assessment by new reviewers, although only in the case of written exams
- an offer for a new exam (re-examination) by new examiners or
- a decision that is not in favour of the student.

If the decision is to offer re-assessment or re-examination, the appellant must be told that re-assessment or re-examination may lead to a lower grade. The student must accept the offer within two weeks from the day the decision was communicated. The acceptance cannot be withdrawn.

If the student does not accept within this period of time, there will be no re-assessment or re-examination.

Re-assessments or re-examinations must take place as soon as possible.

For re-assessments the case documents must be made available to the review panel, viz. the assignment, the answer, the complaint, the statements made by the original examiners with the complainant’s comments as well as the educational institution’s decisions.

The appeals panel must reach a decision at the latest two months – for summer exams three months – after the appeal was submitted.

Decisions of the appeals panel are final. This means that the matter cannot be brought before a higher administrative authority as regards the academic aspects of the appeal.

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6.5.2 Appeals concerning legal matters

Appeals concerning legal aspects of decisions made by the review panel in connection with reassessments or re-examinations or concerning decisions of the appeals panel may be lodged with the Zealand Institute of Business and Technology. The deadline for submitting appeals is two weeks from the day the decision was communicated to the appellant.

Appeals concerning legal aspects of decisions made by the educational institution pursuant to the rules laid down by the Examination Order (such as incapacity, hearing, interpretation of the Examination Order etc.) may be submitted to the educational
institution. The educational institution issues a statement, and the appellant must be given time to comment, normally one week. The educational institution forwards the appeal, the statement and any comments that the appellant may have made to the Danish Agency for Higher Education and Educational Support. Appeals must be submitted to the institution no later than two weeks (14 calendar days) from the day the decision was communicated to the appellant.

6.6 Finance
All expenses for activities expected to be carried out by the student are to be borne by the student, unless otherwise provided.

6.7 The exam is open to the public
An oral/practical exam is open to the public, i.e. others may be present at your exam, and you may invite guests. If the exam is individual and you are examined on the basis of a product prepared by a group, the other members of the group may not be present in the room before they themselves have been examined.

ZIBAT Roskilde may restrict access to the exam in the interest of the examined student or in connection with assignments that are subject to a confidentiality agreement with a company. The examiner may restrict access to the exam room due to lack of space and may prevent certain individuals from attending if necessary to maintain order.

6.8 Sound and image recordings
No sound or image recordings may be made during the exam, unless they are part of the exam. In that case, the recording is carried out by ZIBAT.

6.9 Use of computer at written exams
ZIBAT Roskilde does not make computers available at exams. This means that you will have to bring a computer and an extension cord to be connected to the power supply in the exam room.

6.10 Assessment/exam result
The attendance lists for the different written exams show when the exam result is available in WISEflow (under "Arkiv” (Archive)) and on ums.easj.dk (under "Karakterer” (Marks)).

You cannot get your exam results by contacting the programme administration or other employees at ZIBAT.

6.11 Number of examination attempts
You have a total of three attempts for each exam². ZIBAT Roskilde may grant you additional attempts but only under very special circumstances.

² However, this does not apply to initial assessment tests where only two attempts are permitted. For more information see the relevant curriculum.
It is up to you to ask for an exemption to be allowed an additional exam attempt if you get into a situation where you need it.

You must submit an application to the programme administration at the latest five days from receipt of the result of the exam you failed to pass for the third time. The student counsellor for your programme makes a decision in the matter, and you are entitled to an answer within 14 days from the day the programme administration received your application for exemption.

4.3 Criteria for assessment of study activity

Studying for a degree at ZIBAT is comparable to being in the labour market. Like any other place of work, the students must therefore attend all scheduled tuition and any other study activities. Absence is noted – and in the event of excessive absence, the student will be summoned for an interview to discuss this in order to reduce the absence as fast as possible.

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