Computer Science

National section

Curriculum 2025

ERHVERVS
AKADEMI
SYDVEST

CURRICULUM
for
AP in Computer Science

Valid from 01.08.2024

Contents

This national part of the curriculum for Datamatiker AK has been issued in accordance with section 22, subsection 1 in the executive order on technical and mercantile vocational academy programs and professional bachelor's programmes. This curriculum is supplemented by the local part of the curriculum, which is determined by the individual institution offering the programme.

The national part has been prepared by the educational network for Datamatiker AK and approved by all the offering institutions.

1. The education objectives for learning outcomes

Knowledge
The graduate has:

- knowledge of practice and central applied theory and method within software development in relation to development and integration of IT systems.
- knowledge of and understanding of company relations in relation to system development, including how IT solutions can be developed and integrated into the business.
- knowledge of and understanding of technological conceptual frameworks and IT systems' technological foundation in relation to programming, debugging and puching software live.

Skills
The graduate can:

- use key methods and tools within software development to methodically uncover requirements for IT systems, including assessing the extent to which the requirements can be realized within a given framework.
- apply practical development environments, programming techniques and tools for software construction, including ensuring the quality of the developed product through the use of methods for error detection in a systematic way.
- use key methods and tools in connection with system development, including analysis, design and documentation of IT solutions as well as quality assurance of architecture, functionality, data and the user interface.
- assess practical issues within IT with the inclusion of a business perspective, as well as set up and choose solution options.
- convey practical issues and solutions, including work carried out in such a form that the documentation is useful for business partners and users broadly.

Competences
The graduate can:

- handle development-oriented situations within system development processes using the subject's methods, techniques and tools.
- participate in professional and interdisciplinary collaboration and project work in connection with software development with a professional approach.
- in a structured context, acquire new knowledge, new skills and new competences in relation to software development, system development and business understanding, including acquiring professional domain knowledge and technological knowledge.

2. The 7 national subject elements of the education

The education contains 7 national subject elements that have a total weight of 90 ECTS.

2.1. Programming 1

Contents
The subject element deals with design and programming for the realization of IT systems. The focus is on programming high-quality IT systems in an appropriate architecture with user interface, functionality and database. Solutions are constructed using tools and techniques used in the profession and emphasis is placed on supporting good program design and development of systems taking quality assurance into account.

Learning objectives for Programming 1

Knowledge
The student has:

- knowledge of the specification of abstract data types.
- knowledge of criteria for programme quality.
- understanding of abstraction mechanisms in modern programming languages as well as understanding of the application of theory and method within programming.

Skills
The student can:

- apply key methods to specify and construct algorithms.
- use key facilities in the programming language to realize algorithms, design patterns, abstract data types, data structures, design models and user interfaces.
- use a widespread development environment, including version control system and key software components/libraries to design and construct practical applications based on an appropriate architecture.
- apply key methods and techniques to realize models in a database system and construct programs that interact with a database.
- use key methods and techniques to design and construct programs that contain parallel execution and concurrency.
- use period techniques and tools for carrying out tests and quality assurance as well as prepare documentation in relation to applicable standards in the profession.
- assess qualitative and quantitative properties of algorithms and data structures.
- communicate practical issues and solution options to colleagues within programming.

Competences
The student can:

- deal with development-oriented situations within programming in smaller IT projects.
- participate in professional and interdisciplinary collaboration with a professional approach in relation to smaller IT projects based on programming.
- in a structured context acquire new knowledge, skills and competences in programming languages, development environments, programming techniques and programme design.

ECTS scope
The subject element Programming 1 has a scope of 30 ECTS points.

2.2. System development 1

Contents
The subject element deals with central techniques, tools and methods for analyzing a problem area and designing a smaller system. The subject element employs widely used diagramming techniques and tools for modeling the functionality and content of database-based systems. The focus is on preparing usable and flexible smaller systems with user interfaces. The subject element also includes techniques for planning and carrying out quality assurance activities.

Learning objectives for System Development 1

Knowledge
The student has:

- knowledge of the importance of quality criteria for the system development process and the final design of the system.
- understanding of practical issues and users' needs as well as understanding of quality criteria.

Skills
The student can:

- apply a central system development method.
- use selected techniques, patterns and methods for modeling IT systems at analysis and design level.
- use relevant techniques and tools for planning, designing and carrying out tests and quality assurance.
- use an appropriate software architecture.
- assess techniques and methods for uncovering and formulating requirements for IT systems.
- assess principles and techniques for developing user interfaces.
- communicate and document the system development process and product to relevant stakeholders, including traceability.

Competences
The student can:

- handle development-oriented situations using system development methods and associated techniques.
- participate in professional and interdisciplinary collaboration in IT projects with a professional approach.
- in a structured context, acquire new knowledge, skills and competences in relation to system development.

ECTS scope
The subject element System development 1 has a scope of 15 ECTS points.

2.3. Technology 1

Contents
The subject element deals with technological aspects and issues in connection with system development and programming of IT systems. The focus is on concurrency, database systems and operating systems.

Learning objectives for Technology 1

Knowledge
The student has:

- knowledge of and understanding of up-to-date and central operating systems and database systems, including their structure and functionality.
- understanding of theory and practice regarding contemporary issues and the IT industry's use thereof.

Skills
The student can:

- use key methods and tools for synchronization by parallelism.
- use key features of database systems and operating systems.

Competences
The student can:

- in a structured context, acquire new knowledge, skills and competences about functions in operating systems and database systems.
- handle and deal with development-oriented situations within technological aspects and issues i connection with system development and programming.

- participate in professional and interdisciplinary collaboration with a professional approach to IT projects.

ECTS scope
The subject element Technology 1 has a scope of 5 ECTS points.

2.4. IT and Business Development

Contents
The subject element deals with digitization and IT strategy as well as general business understanding and value creation via IT. The subject element focuses on how projects can be managed in order to optimize digital business processes and models.

Learning objectives for IT and Business Development

Knowledge
The student has:

- knowledge of how IT can improve business processes and develop the company.
- knowledge of organizational changes in IT implementation.
- understanding of IT Governance and sustainable IT.
- understanding of human interaction in the company.

Skills
The student can:

- apply project management, including time and resource management.
- use innovative methods with a focus on project work in practical development projects.
- assess practical business processes based on key analysis methods.
- convey the status of IT projects both internally and externally.

Competences
The student can:

- manage interaction between the development of business processes and the design of IT systems.
- participate professionally in project work and collaborate with stakeholders in IT projects.
- in a structured context, acquire new knowledge, skills and competences about IT in a business perspective.

ECTS scope
The subject element IT and Business Development has a scope of 10 ECTS points.

2.5. Programming 2

Contents
The subject element deals with the design, architecture, programming and deployment of distributed systems, including the intermediate communication.

Learning objectives Programming 2

Knowledge
The student has:

- knowledge of integration between heterogeneous components and platforms.
- understanding of theory, practice and sustainability regarding distributed programming.

Skills
The student can:

- apply central techniques to design and construct programs with multiple concurrent users based on collaborative processes in a distributed architecture.
- apply distributed software architecture design patterns to construct programs that use up-to-date network technologies taking into account security aspects.
- use key methods and tools to develop distributed systems.
- apply key methods and techniques to integrate systems.
- assess the consequences of a proposed solution.

Competences
The student can:

- deal with development-oriented situations within programming in larger IT projects.
- participate in professional and interdisciplinary collaboration with a professional approach in relation to larger IT projects.
- in a structured context, acquire new knowledge, skills and competences in programming languages, development tools, programming techniques and program design.

ECTS scope
The subject element Programming 2 has a scope of 10 ECTS points.

2.6. Technology 2

Contents
The subject element deals with technological issues and aspects within networks, distributed systems and security, taking sustainability into account. There is a focus on the use of the mentioned areas in system development, programming, deployment and hosting.

Learning objectives Technology 2

Knowledge
The student has:

- knowledge of practice and centrally applied theory in the design and realization of distributed systems, taking into account sustainability.
- knowledge of techniques and methods for deployment and hosting.
- understanding of fundamental network concepts.

Skills
The student can:

- use key tools for virtualization.
- use key and in practice widespread application protocols.
- assess practical issues regarding key security concepts and threats and use key tools and methods for handling these.
- assess relevant technological aspects in the development of distributed systems.

Competences
The student can:

- participate in the choice of technologies in connection with the development of distributed systems.
- in a structured context, acquire new knowledge, skills and competences within distributed systems.

ECTS scope
The subject element Technology 2 has a scope of 10 ECTS points.

2.7. System development 2

Contents
The subject element deals with ensuring quality through the use of the system development methods and processes chosen for the situation. The subject element works with situational methods for the development of different types of systems, including distributed systems.

Learning objectives System development 2

Knowledge
The student has:

- knowledge of the importance of system development methods and processes for quality in product and process, taking sustainability into account.

Skills
The student can:

- use one or more central system development methods.
- use key tools to prepare project plans.
- use relevant quality assurance methods in connection with process and product.
- assess practical issues and situationally choose a process model and system development method.

Competences
The student can:

- carry out a systematic and situational adaptation of system development methods and processes to a concrete practical project.
- participate competently in a professional and interdisciplinary IT project with adapted methods.
- in a structured context, acquire new knowledge about process models and system development methods.

ECTS scope
The subject element System development 2 has a scope of 10 ECTS points.

3. Internship

Learning objectives for the internship

Knowledge
The student has:

- knowledge of and understanding of the day-to-day operations in the internship company, especially in relation to the tasks in the internship.
- understanding of the profession's and internship area's application of theory, method and technology in practice.

Skills
The student can:

- use versatile technical and analytical working methods linked to employment within the internship.
- assess practical issues and establish solution options within the internship.
- communicate practical issues and justified proposed solutions to business partners, customers or users in the internship.

Competences
The student can:

- handle development-oriented practical and professional situations in relation to the internship.
- handle structuring and planning of daily work tasks in the internship.
- participate in professional and interdisciplinary collaboration with a professional approach.
- acquire new knowledge, skills and competences in relation to the internship.

ECTS scope
The internship has a scope of 15 ECTS points.

Exam
The internship ends with an exam. For the form of the test and the organization of the test, etc., please refer to the local part of the curriculum.

4. Requirements for the final exam project.

The final exam project, together with the other exams of the education and the internship test, documents that the education's goals for learning outcomes have been achieved.

The final exam project must also document the student's understanding of practice and central applied theory and method in relation to a practical problem. The problem must be based on a specific task within the field of education. The problem, which must be central to the education and the profession, is formulated by the student, possibly in collaboration with a private or public company. The institution must approve the problem definision.

Final exam project
The Final Exam Project completes the last semester of the degree programme after the student has passed all previous exams.

ECTS scope
The final exam project has a scope of 15 ECTS points.

Exam form
The test consists of a project and an oral part. The test is with external censorship, and an overall individual grade is given according to the 7-step scale for the project and the oral part.

5. Rules about merit

Passed education elements equivalent the corresponding education elements at other educational institutions that offer the education.

The student has a duty to provide information on completed educational elements from another Danish or foreign higher education and on employment that can be assumed to be able to give credit.

In each case, the educational institution approves credits on the basis of completed educational elements and employment that is commensurate with subjects, educational parts and internship parts.

The decision is made on the basis of a professional assessment.

Upon prior approval of a study stay in Denmark or abroad, the student is obliged to document the completed educational elements of the approved study stay after the end of the study stay.

In connection with the prior approval, the student must give consent for the institution to obtain the necessary information after the end of the study stay.

In the case of approval according to the above, the education element is considered completed if it has been passed according to the rules on the education in question.

6. Effective date

This national part of the curriculum comes into force on 01.08.2024.
The curriculum applies to all students on the program from the effective date.

Computer Science

Institutional section

Curriculum 2025

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Table of contents

1. Curriculum framework

This is a translated version of the Danish curriculum. In case on any discrepancies between this curriculum and the Danish curriculum, the text in the Danish curriculum applies.

This curriculum is based on:

- Applicable Ministerial Order on Academies of Professional Higher Education
- Applicable Ministerial Order on Academy Profession Programmes and Professional Bachelor Programmes
- Applicable Ministerial Order on Examinations and Tests on Professionally and Business Oriented Higher Education Programmes (the Examination Order)
- Applicable Ministerial Order on Grading Scale for Education Programs at the Ministry of Higher Education and Science (the Grading Scale Order)
- Applicable Ministerial Order on Technical and Commercial Academy Profession Programmes and Professional Bachelor Programmes
- Applicable Ministerial Order on Admission to and Enrolment on Academy Profession Programmes and Professional Bachelor Programmes (the Admissions Order).

All can be found here: https://www.retsinformation.dk/

1.1. Effective date and transition period

This institution-specific section of the curriculum takes effect on 01.08.2025 and applies to all students enrolled on the programme on this date or later.

Current students at the Academy will complete their studies according to the curriculum valid at the initiation of their studies. With the exception of students on leave, they will continue their studies according to the curriculum valid at the time of enrolment.

1.2. The graduates title in Danish and English

The programme gives the graduate the right to use the title AP Graduate in Computer Science. The Danish title is Datamatiker AK.

1.3. Scope of the programme

The scope of the AP programme in Computer Science is to qualify the graduate to be able to independently carry out work in analyzing, planning and implementing solutions regarding development and integration of IT systems in private and public companies, both nationally and internationally.

The programme is placed at level 5 in the qualification framework for higher education.

The programme corresponds to 150 ECTS-credits, which includes:

- ✓ Educational elements with a total scope of 120 ECTS-credits which are organized within the professional areas of the programme
- ✓ Internship with a total scope of 15 ECTS-credits
- ✓ Final examination project with a total scope of 15 ECTS-credits

2. The subject elements of the programme

The educational elements are organized within the following subject elements with a total scope of 120 ECTS-points and are mutually weighted in the ratio 3:6:11:4.

The Business: The subject element contains an understanding of how IT-solutions can develop and be integrated into the business and the business processes. Including how new business forms such as E-business can be implemented, as well as what risks may be associated with new solutions, for example regarding IT security. The subject element also includes innovation and change management as well as planning and managing IT projects.

System Development: The subject element includes various methods for analysis, design and documentation of IT solutions. Including the use of patterns and design principles as well as usability and quality assurance of both functionality, data and user interface.

Programming: The subject element contains an understanding of programming with focus on different languages, techniques and fields of application. The subject element contains algorithms, architecture as well as more specific matters such as concurrency, distributed programming and database programming. There is a focus on the use of practical development environments, program development, documentation and testing.

Technology: The subject element contains an understanding of the technological foundations of IT systems, including operating systems, networks and database systems. The subject element also includes synchronization of multiple users and security in distributed systems.

3. Overview of the programme

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12,5 ECTS</td><td>Computer network and Distributed Systems
10 ECTS</td><td rowspan="3">Electives
30 ECTS</td><td>INTERNSHIP
15 ECTS</td></tr>
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5 ECTS</td><td>IT and Business Development 2
5 ECTS</td><td rowspan="2">Software-architecture and distributed Programming
10 ECTS</td><td rowspan="2">FINAL EXAMINATION PROJECT 15 ECTS</td></tr>
<tr><td>Database and Operating systems
5 ECTS</td><td></td></tr>
</table>

3.1. National programme elements

Appears in the national part of this curriculum.

3.2. Local and elective programme elements

In addition to the national part of this curriculum, the programme includes 30 ECTS local elements, organized as elective elements. Electives appear in the catalogue on Moodle. Exams and prerequisites for the exam will appear in section 5.

Contents

The elective educational elements give the student an opportunity to gain additional competencies through specialization within topics broadly related to the IT field.
A number of elective courses are offered each year. These courses, which are posted on EASV Moodle, are created in close cooperation with the local business community and with input from both teachers and students.

Students can arrange their elective courses as a theoretical and/or practical educational process. Approval from the school must be gained.

ECTS credits
The elective elements account for a total of 30 ECTS credits. The various elements will be offered in multiples of 5 ECTS.

Learning objectives
The specific learning objectives for each elective are described in the subject description to be found on EASV Moodle.
General learning objectives for the elective elements are as follows:

Knowledge
The student has knowledge about:
- Theory and practice in relation to the topics chosen
- Relevance of the topics chosen in relation to theory and practice within the IT-field

Skills
The student is able to:
- Select, describe and carry out literature search related to a self-selected IT-related issue
- Discuss societal aspects related to the chosen topics
- Evaluate issues and suggest solutions in relation to the topics chosen
- Communicate central results

Competencies
The student is able to:
- Independently familiarize him-/herself with new topics within the theory and/or practice of the subject areas
- Put into perspective and relate the chosen topics to other subject areas within the education

Timing
Electives are offered during the 4th semester of the programme.

4. Teaching and working methods
Teaching in the Computer Science degree programme is conducted as a dynamic and interactive process, where focus is placed on active participation by the students, and where both students and instructors contribute constructively to the learning process. The individual student is expected to be responsible for his or her own learning.

To ensure optimal and professional learning, as well as the personal development of the individual student, teaching in the programme makes use of a variety of teaching methods. Emphasis is placed on dialogue, discussion and project work, with instruction methods ranging from classroom teaching to interdisciplinary cases, thematized assignments and teamwork. Visiting lecturers and company visits are also arranged.

Teaching form
Teaching is based on applied theory and relevant business practice, i.e. general problems and issues in the IT industry. Topics and themes are selected which cover issues relevant for different types of businesses,

with focus on the challenges presented by a changing environment, ongoing developments and increasing internationalization.

Instruction will focus on work and learning methods that enhance the student's abilities to work independently, collaborate with others and think innovatively – using classroom teaching, project work in groups, and individual assignments as central teaching forms. The student is involved in the planning of the course and is encouraged to make use of teamwork, interactive learning and creative thinking.

5. Exams and prerequisites

Semester	Exam	ECTS credits	Internal/external	Evaluation
1st semester	The Study Start Test	-	Internal	Approved/Not approved
2nd semester	First Year Examination Compulsory element: Programming, Systems Development, IT and Business Development	60	External	7-point grading
3rd semester	Programming Compulsory element: Programming 2 and Technology 2	20	Internal	7-point grading
3rd semester	Systems Development Compulsory element: Systems Development 2	10	Internal	7-point grading
4th semester	Specialization	30	Internal	7-point grading
5th semester	Internship	15	Internal	7-point grading
5th semester	Final exam project	15	External	7-point grading

Information about time and place for the examinations will be posted on Moodle.

Joining the semester, the education element, etc. is also a registration for the corresponding exams. The student has three attempts for each exam, except for the Study Start Test where the student has two attempts. If the student has used all assigned attempts, the student cannot continue the study programme, and the enrolment will consequently be cancelled according to the rules in the Admissions Order.

All examinations are to be submitted/presented in understandable English or Danish. Students with other native languages can seek exemption from the fact that formulation and spelling skills can influence the evaluation of the final examination project or any exam for which the curriculum specifies that such skills are included in the evaluation. Application for the exemption should be sent to the head of department at least four weeks prior to the examination.

Prerequisites for the exam

In order to sit the exam, there may be one or more prerequisites that must be met. Prerequisites are described in the following at each exam.
Prerequisites can be several different things, e.g. submission of a written project, participation in class, a presentation, etc.
Note that if one or more of the prerequisites is not met the student will not be allowed to sit the exam and will have used one exam attempt.

5.1. Scope and criteria for examinations

In the following, exams in each of the national compulsory elements is described, including:

- Prerequisites for taking the exam
- Exam form
- Assessment criteria
- Formal requirements if a written product is included, including requirements for individualization in group projects

5.1.1. The Study Start Test

According to the Executive Order on Examinations, the student must participate in and pass a study start test in order to continue on the study programme. The purpose of the study start test is to clarify: whether the student has actually started the programme.
The study start examination is held no later than two months after the commencement of the study programme.

Test form

The study start test is an individual, written test, based on the student's reflection on prior knowledge and motivation for the study programme.

Assessment criteria

The study start test is internal assessed and is assessed with "Approved" or "Not approved".

If the student does not fulfil the study start test requirement in the first attempt, the student has another attempt, which must be conducted no later than three months after the commencement of the study programme. If the student does not fulfil the test in the second attempt, the student cannot continue on the study programme and his/her enrolment will consequently be cancelled.

5.1.2. First Year Examination – Examination in the compulsory educational element Programming, Systems Development, IT and Business Development

The First Year Exam must be passed within the student's first year of study.
If the student has not participated in or passed the First Year Exam the student cannot continue the study programme, and the enrolment will consequently be cancelled according to the Admissions Order.

Prerequisites for the exam

The following requirements apply:

- Submission of 4 compulsory assignments cf. Syllabus on EASV Moodle

- The written project, on which the examination and appraisal are based, is to:
    - Meet all formal requirements, cf. below, and
    - Be submitted on time, cf. examination schedule available on EASV Moodle

Exam form

This examination is an external, oral group exam and is based on a written group project. Grading is according to the 7-point grading scale.

Groups are to consist of 2 – 4 students; any exception to this requirement is to be approved by the teacher.

The examination represents 60 ECTS. One combined grade for the written report and the oral presentation is given.

The project is presented by the project group in the oral exam, the duration of which is max. 10 minutes. This is followed by an individual examination, lasting 30 minutes including grade evaluation, of each member of the group.

Assessment criteria

The evaluation criteria for the examination are the learning objectives for the compulsory educational element Programming, Systems Development, Technology and Business understanding offered during the 1st and 2nd semester.
Learning objectives can be seen in the national section of the Curriculum.

Formal requirements for the written project report

The following components should be included:

- Front page with title of the report
- Table of contents
- Introduction, including main issues, problem statement and approaches
- Conclusion (Remember to ensure correlation between the introduction and the conclusion. It should in principle be possible to understand the conclusion without having to read other sections than the introduction).
- Bibliography (including all sources referred to in the report)
- Appendices (including only those documents that are central to the report)

The project must be minimum 20 standard pages and a maximum of 40 standard pages.
A standard page is defined as 2400 characters, including spaces and footnotes, but excluding the front page, table of contents, bibliography and appendices. Appendices are not included in the grading evaluation.

Timing

The examination is held at the end of the 2nd semester. Further information regarding date and place as well as submission of the written group report can be found on EASV Moodle.
The exam must be passed before the end of the first year of study if the student is to be allowed to continue in the program.
The head of department can grant the individual student exemption from the specified deadlines for passing the examination if this is justified by illness, maternity leave or other exceptional circumstances.

Language
English/Danish

5.1.3. Examination in Programming – Examination in the compulsory educational elements Programming 2 and Technology 2

Prerequisites for the exam
The following requirements apply:

- Submission of 2 compulsory assignments cf. Syllabus on EASV Moodle
- The written project, on which the examination and appraisal are based, is to:
    - Meet all formal requirements, cf. below, and
    - Be submitted on time, cf. examination schedule available on EASV Moodle

Exam form
This is an internal oral examination.
The oral examination lasts for 30 minutes, including evaluation. One combined grade for the written report and the oral presentation is given.
The examination represents 20 ECTS.

Assement criteria
The evaluation criteria for the examination are the learning objectives for the compulsory educational element Programming 2 and Technology 2 offered during the 3rd semester of the programme.
Learning objectives can be seen in the national section of the Curriculum.

Formal requirements for the written project report
The project should involve essential parts of the semester curriculum for the subjects SDP and CDS.
Timing
The examination is held at the end of the 3rd semester. Further information regarding time and place can be found on EASV Moodle.

Language
English/Danish

5.1.4. Examination in Systems Development 2 – Examination in the compulsory educational element Systems Development

Prerequisites for the exam
The following requirements apply:

- Submission of 2 compulsory assignments cf. Syllabus on EASV Moodle
- The written project, on which the examination and appraisal are based, is to:
    - Meet all formal requirements, cf. below, and
    - Be submitted on time, cf. examination schedule available on EASV Moodle

The examination
This is an internal individual examination graded according to the 7-point grading scale.

Groups are to consist of 2 – 4 students; any exception to this requirement is to be approved by the head of department.
The examination represents 10 ECTS.
One combined grade for the written report and the oral presentation is given.
The project is presented by the student in 10 minutes, followed by an examination dialogue. The entire exam lasts 20 minutes including grade evaluation.

Assessment criteria
The evaluation criteria for the examination are the learning objectives for the compulsory educational element System Development 2 offered during the 2nd year of the education.
Learning objectives can be seen in the national section of the Curriculum.

Formal requirements
The project should involve essential parts of the semester curriculum for the subject SDM.

Timing
The examination is held at the end of the 3rd semester. Further information regarding time and place can be found on EASV Moodle.

Language
English/Danish

5.1.5. Elective educational elements
Prerequisites for the exam
The following requirements apply:
- Submission of 2 compulsory assignments cf. Syllabus on EASV Moodle

Examinations
An internal oral examination, which can be based on a synopsis that is not included in the overall evaluation, is held in each elective element. Assessment is according to the 7-point grading scale.

Assessment criteria
The evaluation criteria for the examination are the learning objectives for the elective element.

Language
English/Danish

6. Internship
The learning objectives for the internship appear in the national part of this curriculum. The internship corresponds to 15 ECTS-credits.

Requirements and expectations
The internship allows the student to work with relevant issues and gain knowledge about relevant job functions.

During the internship the student are linked to one or more companies. The internship can be organized flexibly and differentiated and can form the basis for the student's final examination project.

The relation between theoretical learning and actual practice forms the basis for the student's objectives for the internship period.

Based on the learning objectives for the internship (see the national section of the Curriculum), the student, the internship company and the school supervisor collaborate to identify specific objectives for the internship period.

This then forms the basis for organizing the student's work during the internship period.

The internship can be compared to a full-time job, with demands regarding working hours, work to be done, involvement and flexibility that correspond to those that the student can expect to meet in their first job. If, for documented health reasons, the student cannot complete an internship for 37 hours per week, the student can apply for a dispensation to organize the internship period appropriately.

Prerequisites for the exam

- The student must have actively participated in the internship,
- internship report, on which the examination and the evaluation are based, must meet the requirements cf. below,
- the internship report must be handed in on time, cf. the exam schedule available on Moodle, and
- the student must have completed the evaluation of the internship (questionnaire)

The Examination and assessment criteria

This examination is an internal oral exam, based on the internship report.

The assessment criteria will be the learning objectives for the internship.

Evaluation is graded according to the 7-point grading scale based on an overall assessment of the written internship report and the oral presentation.
The student will present relevant parts of the internship report in approximately 10 minutes, followed by an examination dialogue where all parts of the internship can be included. The exam lasts for 20 minutes including evaluation.

The presentation can be held via video conference if approved by the head of department.

The exam is held at the 5th semester after the internship. Further information regarding time and place and about handing in the internship report can be found on Moodle.

Requirements for the internship report

The following requirements apply:

- Front page with student name, internship company, and internship period
- Preface
- Introduction, including main issues, problem statement and approaches
- Reflection of the learning outcome

- Description of specific jobs done during the internship
- Conclusion
- Appendix: Statement from the internship company and the student's diary/internship log
- Bibliography (including all sources referred to in the report)
- Other Appendices (including only those documents that are central to the report)

The maximum number of pages is 10 standard pages. A standard page is defined as 2400 characters, including spaces and footnotes, but excluding the front page, table of contents, bibliography and appendices. Appendices are not included in the grading evaluation.

The internship report is submitted in English or Danish for AP in Computer Science.

7. Final examination project

The final examination project and the internship exam together with the other exams must document that the learnings objectives of the programme are met.

Requirements regarding the final examination project as well as learning objectives can be found in the national section of this curriculum.

The examination is held at the end of 5th semester. Further information regarding time and place for the examination can be found on Moodle.

Prerequisites for the exam

Failure to submit the written project correctly means that the student will not be allowed to attend the exam, the student will use one exam attempt.

The examination in the final project cannot be held until the internship exam and all other exams in the education have been passed.

The exam and organization

This is an external individual examination graded according to the 7- point grading scale.

Groups are to consist of 2 – 4 students; any exception to this requirement is to be approved by the head of department.
One combined grade for the written report and the oral presentation is given.

The project is presented by the student in 15 minutes, followed by an examination dialogue.
The final exam project represents 15 ECTS.

The examination will be in Danish or English for AP in Computer Science.

Assessment criteria

The evaluation criteria for the examination are based on the learning objectives for the final project in the national section of the Curriculum.

Formulation and spelling skills can influence the evaluation of the final examination project.

Requirements for the written report

Project reports must be at least 15 standard pages. Project reports written by a single student may total 40 standard pages as a maximum; reports written by several students may total an additional 10 standard pages per student.

8. Educational elements completed abroad

The student can – with pre-approval – obtain credit for any of the educational elements that the student complete abroad. In such cases the student must, after completion of the studies abroad, document the educational elements that have been completed. In connection with pre-approval the student must agree that the school is entitled to secure any necessary information about the educational elements.

With prior acceptance of credits, the specific educational element will be considered completed if the student have passed the course according to existing and relevant rules for the programme.

9. Credits for local and elective educational elements

Any elective and local educational element that has been passed is considered to be equivalent to the corresponding educational element offered by other educational institutions offering the education.

The student is to apply for prior approval if credit is wished for educational elements that are not included in the education.

10. Participation requirements

In order for the teaching methods to work and to achieve the learning objectives the student has participation requirements in the form of handing in/presenting assignments/projects etc.

Handing in/presenting assignments/projects etc. can be expressed as exam prerequisites that must be met before the student can take part in the exam. Prerequisites are described in section 5.

If a student does not comply with the participation requirements, the study programme will provide help and guidance.

11. Study activity

At EASV the student must be academically active to remain enrolled in the study programme. At EASV lack of study activity is defined as *the student not having passed any of the exams in the study programme for a continuous period of 1 year.*

Lack of study activity will imply the enrolment to be cancelled according to the rules of the Admissions Order.

12. Exam terms and conditions

Joining the semester, the education element, etc. is also a registration for the corresponding exams

Deregistration from an exam is only possible under special circumstances such as illness (documented with a medical certificate), death in the family or exceptional circumstances that affect the student's well-being. Exemption can be granted if the student is an elite athlete, and on that basis needs to deregistrate from the exam. Deregistration shall be provided to the head of department no later than at the start of the exam or as soon as possible thereafter. Written documentation must be provided before any dispensation can be granted for the used exam attempt.

12.1. Use of aids

Any rules for restrictions in the use of aids will be made clear in the specifications for the individual examination.

12.2. Special examination conditions

The student can apply for special examination conditions when warranted by physical or mental impairment. The application should be submitted to the head of department at least four weeks prior to the date of the examination. An exemption from this deadline can be given in the case of suddenly occurring health issues.

The application must be accompanied by a medical certificate, a statement from e.g. an institute dealing with speech, hearing or sight impairment or dyslexia, or other forms of documentation certifying serious health issues or relevant functional impairment.

12.3. Re-examinations due to illness, failing or non-attendance

12.3.1. Re-examination due to illness

If the student have not been able to sit an examination due to documented illness or other unforeseen circumstance, the student are given the opportunity to sit a re-examination as quickly as possible. In the case of an examination taking place at the end of the last examination period, the student are given the opportunity to sit the examination in the same examination period or immediately thereafter.

This examination can be identical to the next ordinary examination. It is the student's responsibility to investigate when the re-examination will be held.
Information about time and place for these re-examinations can be found on Moodle.

Illness must be documented by a medical certificate received by the institution three days at the latest after the examination has been conducted. If the student become acutely ill during an examination the student must document illness on the day in question.

If illness is not documented according to the above rules, the examination will count as one examination attempt spent.

Any costs for the medical certificate are the responsibility of the student.

12.3.2. Re-examination due to failing or non-attendance

By not passing or by not attending the examination, the student is automatically registered to sit the re-examination, provided that the student has not spent all three examination attempts. The re-examination can be identical with the next ordinary examination.

It is the student's responsibility to investigate when the re-examination will be held. Information about time and place for these re-examinations can be found on Moodle.

13. Errors or omisssions during the exam

If errors and omissions are brought to attention during the exam, the head of department decides how the error or the omission can be remedied.

In the case of serious errors or omissions, or where it must be considered to be the most correct way to remedy the error, the head of department may cancel the exam in question and arrange a re-examination. In the case of a cancelled exam the assessment lapses.

In the case of other significant errors or omissions and extraordinary exam may be offered. The offer is given to all affected students. The student may choose to keep their original assessment even if they have participated in the extraordinary exam.

14. Cheating offences and disruptive behaviour

During any exam the student must behave considerately and follow the instructions given by the examination supervisor, examiner or censor.

Cheating on exams will be dealt with according to the rules in the existing Ministerial Order on Examinations on Professionally Oriented Higher Education Programmes (The examination order).

It is referred to as cheating offences when the student:

- plagiarizes cf. section 14.1,
- counterfeits,
- conceals or misleads about own efforts or results,
- takes part in an unauthorized collaboration,
- receives or tries to receive help during the exam, or helps other students when it is not a group exam,
- uses unauthorized aids,
- has wrongfully obtained prior knowledge of the examination assignment,
- provides wrongful attendance information, or
- seeks to circumvent, disable or otherwise obstruct the intent of EASV's use of monitoring programs.

When submitting written material, the student must verify by signature that the material has been produced without undue assistance.

14.1. Using one's own work and that of others - plagiarism

Cheating in exams through plagiarism comprises instances where a written answer appears to be completely or partially produced personally by the examinee or examinees, but:

4. Comprises identical or almost identical rendering of the wording or work of others, without clearly identifying this using quotation marks, italics, indentation or other clear indications stating the source of the material, cf. the educational institution's requirements to written work on Moodle.
5. Comprises major pieces of text with choice of words or formulations so close to that of another piece of writing that it is possible to determine through comparison that the text could not have been written without using the source in question.
6. Comprises the use of words or ideas of others without giving reference to the source in an appropriate manner.
7. Re-uses text and/or central ideas from own previously assessed answers (self-plagiarism) without observing the provisions laid down in items 1 and 3 above.

14.2 Disciplinary procedures

Cheating or disruptive behavior during an exam will result in the student not having the exam assessed and one examination attempt will be counted as used.
The student may also receive a written warning. Aggravating circumstances or repeated offences could lead to temporary or permanent expulsion.

15. Complaints about examinations and appeal decisions

Complaints about examinations will be dealt with according to the rules in chapter 11 in the existing Ministerial Order on Examinations on Professionally Oriented Higher Education Programmes (The examination order)

15.1 Complaints about exams

Complaints about the Study Start Test

Complaints about the study start test can be submitted to the educational institution, which will make a decision. The complaint must be sent to the head of department no later than 2 weeks (14 calendar days) after the assessment has been conducted. Academic questions regarding the institution's decision cannot be referred to another administrative authority. Legal questions regarding the institution's decision can be referred to the Danish Agency for Higher Education and Science, cf. section 15.2

Complaints about exams in educational elements and subtests

The student can submit a written complaint about legal or academic issues; including the examination process during an examination in an educational element or a subtest.

The complaint must be submitted to the head of department no later than 2 weeks (14 calendar days) after the assessment of the exam has been conducted. If the deadline is on a public holiday, the first workday hereafter will be considered the deadline.

If the complaint concerns academic issues, the educational institution will immediately request a

statement from the examiners, i.e., the examiner and censor for the examination in question. The statement from the examiners must provide a basis for the institution's decision on academic questions. The institution normally sets a deadline of 2 weeks for submitting the statements, excluding the month of July. As soon as the examiners' statements are available, the complainant is given the opportunity to comment on the statements within a typical deadline of one week.

The decision is made by the institution based on the complaint, the examiners response and the complainant's potential comments on the statement. The decision must be in writing and justified, and can:

1. Offer the possibility of a new assessment (re-assessment). This applies to written exams only.
2. Offer the possibility of a new exam (re-examination) with new examiners.
3. Reject the complaint.
4. A combination of 1-3 if the exam includes a written assignment with oral examination.

15.2 Appeal of decision

Academic questions regarding the educational institution's decision, cf section 15.1, may be brought before an appeals panel. The appeal must be submitted two weeks at the latest after the decision has been communicated to the student.

The appeals panel consists of two authorised censors appointed by the chairman of the censors, a lecturer authorised to conduct examinations and a student studying the subject area (the degree programme), both of which are appointed by the head of department.

The appeals panel makes decisions based on the material used by the educational institution in making its decision and the student's complaint. The appeals panel must make its decision no later than 2 months for winter exams and 3 months for summer exams after the appeal has been submitted.

The appeals panel's decision can:

1. Offer the possibility of a new assessment with new examiners (re-assessment). This applies to written exams only.
2. Offer the possibility of a new exam with new examiners (re-examination).
3. Reject the appeal.
4. A combination of 1-3 if the exam includes a written assignment with oral examination.

Academic questions regarding the appeals panel's decision cannot be referred to another administrative authority.

Legal questions regarding the appeals panel's decision can be referred to the institution which will make a decision. The complaint must be submitted to the institution no later than two weeks after the student has received the institution's decision. The institution's decision regarding legal matters can be referred to the Danish Agency for Higher Education and Science, cf. section 15.3.

15.3 Complaints concerning legal matters

The educational institution's final decisions can be referred to the Danish Agency for Higher Education

and Science when the complaint concerns legal matters. The deadline for submitting a complaint is two weeks from the day the decision is communicated to the complainant. The complaint is submitted to the institution, which prepares a statement that the complainant must have the opportunity to comment on within a minimum period of one week. The institution then forwards the entire case for review by the agency.

15.4 Re-assessment and re-examination

If the decision is to offer re-assessment or re-examination, the complainant must be informed of the fact that the re-assessment or re-examination may result in a lower grade.

The student must accept the offer for re-assessment og re-examination within a deadline of 2 weeks after the decision has been communicated. If the student does not accept within the deadline, the re-assessment or re-examination will not be conducted.

The re-assessment or re-examination must take place as soon as possible. If the diploma has been issued, it must be withdrawn until the final assessment is available, after which a new diploma will be issued.

If the decision is to offer a re-assessment or re-examination, the head of department appoints new examiners. The chairman of the censors may appoint a censor. The new examiners must assess the submission based on the assignment text and task. The new examiners will then notify the institution of the reassessment result, accompanied by a written justification.

Academic questions regarding reassessment or re-examination cannot be brought before the educational institution again or another administrative authority. Legal questions can be referred to the institution, which will make a decision.

16. Exemptions

The institute can grant exemptions from rules in this institution-specific section of the curriculum in cases where such exemption is justified due to exceptional circumstances. The institutions offering this education cooperate to ensure a uniform exemption practice.

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