

CURRICULUM

The Bachelor's Degree Programme in Web
Development

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ULLA SKAARUP
RECTOR

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1. Framework for the curriculum

1.1. Reading Guide

Studieordningen består af en fællesdel (blå skrift), der er vedtaget i Erhvervsakademiernes uddannelsesnetværk for uddannelsen, samt en institutionsdel (sort skrift), der fastsættes af den enkelte uddannelsesinstitution. Den fælles del er udarbejdet i fællesskab af nedenstående institutioner, som i et tæt samarbejde har forpligtet sig på at sikre national kompetence og ensartet dispensationspraksis. Denne studieordnings fællesdel er fastlagt af følgende institutioner:

Erhvervsakademi Sydvest

Erhvervsakademi Aarhus

Erhvervsakademi Kolding

Erhvervsakademiet Lillebælt

Zealand Sjællands Erhvervsakademi

Københavns Erhvervsakademi

Copenhagen Business Academy

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

- Consolidated Act no. 153 of 27 February 2018 on Academies of Professional Higher Education
- Consolidated Act no. 986 of 18 August 2017 on Academy Profession and Professional Bachelor Degree Programmes (the LEP Order)
- Executive Order no. 841 of 24 June 2018 Executive Order on Academy Profession and Professional Bachelor Degree Programmes (the LEP Order)
- Executive Order no. 1500 of 02 december 2016 on Test and Exams in Vocational Programmes
- Executive Order no. 1495 of 11 December 2017 on Admission to Academy Profession and Professional Bachelor Degree Programmes
- Executive Order no. 262 of 20 March 2007: on Grading Scale and Other Forms of Assessment
- Executive Order no. 1014 of 2 July 2018 on Admission to Technical and Vocational Academy Profession and Professional Bachelor Degree Programmes

Der kan være senere ændringer til ovenstående. De gældende love og bekendtgørelser er tilgængelige på internetadressen www.retsinfo.dk

1.3. Titel of programmes and candidates

Uddannelsens navn er Bachelor's Degree Programme in Web Development.

Dimittenderne fra uddannelsen har ret til at anvende betegnelsen

På engelsk kan betegnelsen Bachelor of Web Development anvendes.

1.4. ECTS credits

The programme is a full-time education programme estimated at 24 months of full-time study. A student year is equivalent to one year of full-time study. One year of full-time study is equivalent to 60 ECTS credits (European Credit Transfer System). The programme thus totals 120 ECTS credits.

1.4.1 Figur 1: Uddannelsens struktur og ECTS-fordeling

			1st year of study	2nd year of study
Core areas of study	Web development (bridging course)	Back end programming 10 ECTS or	10 ECTS	
		Front end programming 10 ECTS		
	Development environments 10 ECTS		10 ECTS	
	Databases 10 ECTS		10 ECTS	
	Interface design 10 ECTS		10 ECTS	
Elective educational components			20 ECTS	
Internship				15 ECTS
Bachelor's degree project				15 ECTS
Total ECTS credits			60 ECTS	30 ECTS

1.5. Learning outcomes

The bachelor's degree project is to demonstrate that the student has achieved the expected level of graduate competence, please see Schedule 1 to Ministerial Order no. 353 of 7 April 2015 on the Bachelor's Degree Programme in Web Development.

Learning outcomes

Knowledge

Upon completion of the course, graduates should have acquired knowledge of:

- the formal and de facto standardisation of the World Wide Web
- the Word Wide Web's standards as a platform for applications
- development environments for web development
- Content Management Systems
- the role of web applications in society and its development, and
- common development methods in web development, and graduates should be able to reflect on the suitability of such methods for different development scenarios.

Skills

Upon completion of the course, students should have acquired the skills to:

- plan and develop applications based on specific development requests
- evaluate and select a suitable programming language for the performance of development requests
- evaluate and select a suitable database system to ensure data and application persistence
- create user interfaces adapted to relevant target groups based on the theory and methods of the relevant subject area
- create user interfaces that make use of the World Wide Web's particular possibilities in terms of design and aesthetics
- prepare documentation – adapted to the target audience and to the extent of the project – of the functionality and development process of a project, and
- use a suitable development environment to perform the development process.

Competencies

Upon completion of the course, students should have acquired the competencies to:

- handle complex situations aimed for progression in web development
- take a professional approach to disciplinary and multidisciplinary collaboration with others.
- identify their learning needs and structure their learning in different learning environments.

1.6. Levels in the Qualifications Framework

The Bachelor's Degree Programme in Web Development is placed at level 6 in the Qualifications Framawork.

1.7. Regulations concerning effective date and transitional provisions

The institution specific part of the curriculum takes effect on 1 August 2015 and applies to all students enrolled with the programme and to all exams initiated on that date or later.

The curriculum (the common part and the institution specific part in the same curriculum) of September 2012-2014 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 1st September 2016.

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 degree programme (see reference concerning the applicable Order in section 1.2):

Admission

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 safeguards satisfactory educational conditions.

§ 13. Ansøgere, der har gennemført en dansk erhvervsakademiuddannelse tilrettelagt som heltidsuddannelse eller har gennemført en dansk uddannelse tilrettelagt som heltidsuddannelse på et højere niveau, kan ikke optages eller indskrives på en erhvervsakademiuddannelse, der er tilrettelagt som heltidsuddannelse.

Stk. 2. Ansøgere, der har gennemført en dansk bacheloruddannelse, professionsbacheloruddannelse eller anden dansk uddannelse på tilsvarende niveau tilrettelagt som heltidsuddannelse eller har gennemført en dansk uddannelse på et højere niveau tilrettelagt som heltidsuddannelse, kan ikke optages eller indskrives på en professionsbacheloruddannelse tilrettelagt som heltidsuddannelse.

Quotas

14. In the event that there are more qualified applicants than study places in the individual admission are, 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 published the distribution of study places determined pursuant to subsections (1) and (2) and a different admission system, if any, pursuant to subsection (3) on its website.

3. Educational components

3.1. Examination schedule

Semester	Examination	ECTS	Assesment	Intern/ ekstern
6th semester	Possible academic aptitude examination ¹	-	Pass/Fail	Internal
	Web development (bridging course) Back end programming or Front end programming	10	7-point grading scale	External
	Development environments	10	7-point grading scale	External
	Interface design	10	7-point grading scale	External
7th semester	Databases	10	7-point grading scale	External
	Elective courses	20	7-point grading scale	External
8th semester	Internship examination	15	7-point grading scale	Internal
	Bachelor's degree project	15	7-point grading scale	External

3.2. Core areas

The study programme covers the following core areas of study

- Web development (bridging course),
- Back end programming (10 ECTS) or
- Front end programming (10 ECTS)
- Development environments (10 ECTS)
- Databases (10 ECTS)
- Interface design (10 ECTS)

40 ECTS credits total.

Core area: Web development (bridging course) Back end programming
ECTS: 10
Contents: The purpose of this core area is to develop students' competencies to develop contemporary web applications using programming paradigms and taking advantage of current, standardised protocols and the possibilities of the client/server model.
Learning outcomes:

¹ If an academic aptitude examination is held, the examination will be describes in paragraph 5.10.

Knowledge

Upon completion of the course, students should have acquired knowledge about:

- design patterns
- fundamental protocols of the World Wide Web
- the advantages and limitations of client/server architecture.

Skills

Upon completion of the course, students should have acquired the skills to:

- create web-based programs
- apply basic programming principles
- use web APIs
- document program structures.

Competencies

Upon completion of the course, students should have acquired the competencies to:

- analyse a development request with a view to constructing a web-based application
- select and apply suitable programming technologies for developing web-based applications — mainly focusing on the server side.

Core area: Web development (bridging course) Front end programming

ECTS: 10

Contents:

The purpose of this core area is to develop students' competencies to develop contemporary web applications using programming paradigms and taking advantage of current, standardised protocols and the possibilities of the client/server model. Furthermore, students should develop an understanding of basic design and visual communication. This core area should also enable students to design simple user interfaces using aesthetic and communicative principles.

Learning outcomes:

Knowledge

Upon completion of the course, students should have acquired knowledge about:

- fundamental protocols of the World Wide Web
- advantages and limitations of client/server architecture
- particular characteristics, weaknesses and strengths of different media
- communication strategies.

Skills

Upon completion of the course, students should have acquired the skills to:

- program and implement a dynamic web application
- master basic design principles

- apply theories on user friendliness and the skills to plan and conduct user tests
- document program structures.

Competencies

Upon completion of the course, students should have acquired the competencies to:

- analyse a development request with a view to constructing a web-based application
- select and apply suitable programming technologies for developing web-based applications — mainly focusing on the client side.

Core area: Development environments

ECTS: 10

Contents:

The purpose of this core area is to develop students' competencies in making a qualified choice of and applying a given development environment.

Learning outcomes:

Knowledge

Upon completion of the course, students should have acquired knowledge about:

- integrated development environments (IDE) and their advantages and limitations
- common programming languages in a web context
- quality assurance and version control of applications in a web context
- types of content management systems and frameworks and their suitability in a web context
- criteria for selection of Content Management Systems or frameworks
- selection of relevant database technology for developing applications in a web context.

Skills

Upon completion of the course, students should have acquired the skills to:

- apply Content Management Systems or frameworks for developing applications in a web context
- use an integrated development environment when developing applications in a web context.

Competencies

Upon completion of the course, students should have acquired the competencies to:

- select a Content Management System or framework for developing applications for a given development assignment.

Core area: Databases

ECTS: 10

Contents:

The purpose of this core area is to develop students' competencies in analysing and applying relevant data-processing models.

Learning outcomes:

Knowledge

Upon completion of the course, students should have acquired knowledge about:

- at least one widely-used modelling language for data modelling
- distributed databases and their prevalence and use in web contexts
- describing problems concerning data exchange and the use of data formats in developing in web contexts.

Skills

Upon completion of the course, students should have acquired the skills to:

- apply data models for development and maintenance in web contexts
- apply complex database queries
- apply transactions
- embed business logic in the database layer
- use data formats for data integration.

Competencies

Upon completion of the course, students should have acquired the competencies to:

- analyse and select the tasks that would be suitably placed in the database layer and those that should be placed in the application layer
- analyse and select a database technology/technologies that will resolve a given development task in a web context suitably.

Core area: Interface design

ECTS: 10

Contents:

The purpose of this core area is to develop students' competencies to enter complex usage scenarios and independently take part in the design process concerning the design of complex user interfaces.

Learning outcomes:

Knowledge

Upon completion of the course, students should have acquired knowledge about:

- common interface design development methods
- human-computer interaction
- communication theory.

Skills

Upon completion of the course, students should have acquired the skills to:

- create convenient user interfaces adapted to relevant target groups based on the theory and methods of the relevant subject area
- apply design methods pertaining to visual design, interaction design and information architecture when designing user interfaces, including prototyping
- work on the development of communications solutions across platforms and media.

Competencies

Upon completion of the course, students should have acquired the competencies to:

- analyse choices of devices and effects in user interfaces and situate these choices in a context
- manage design processes based on analysis and planning
- take part in complex usage situations and independently manage
- the design process when designing complex user interfaces.

3.3. Compulsory educational components within the core areas of the study programme

The study programme's compulsory educational elements

- Web development (bridging course),
 - Back end programming (10 ECTS) or
 - Front end programming (10 ECTS)
- Development environments (10 ECTS)
- Databases (10 ECTS)
- Interface design (10 ECTS)

40 ECTS credits total.

The four compulsory educational components are equivalent to the four core areas of study, have the same name, contents, are worth the same number of ECTS credits and have the same learning objectives. Web development is carried out as a united course, where the content corresponds to Frontend & Backend.

The four compulsory educational components are all finalised by examination.

Assessment

Each examination is assessed and graded according to the 7-point grading scale and is worth 10 ECTS credits.

The learning objectives for the educational component are identical to the learning objectives for the examination.

For the examination type and exam procedure, please see the institutional section of this Curriculum.

3.3.1 Number of examinations for the compulsory educational components

The four compulsory educational components are each finalised with a grade. See the examinations for the study programme in the "Examination schedule" section.

ECTS credits for the core areas and the compulsory educational components are shown in the schedule below.

3.3.2 ECTS credits for the core areas and the compulsory educational components

Compulsory educational components	Web development (Back end or front end programming)	Development environments	Databases	Interface design	
Core areas of study					
Web development (Back end or front end programming)	10 ECTS				10 ECTS
Development environments					10 ECTS
Databases			10 ECTS		10 ECTS
Interface design				10 ECTS	10 ECTS
Total ECTS credits	10 ECTS	10 ECTS	10 ECTS	10 ECTS	40 ECTS

3.4 Elective educational components

Each elective course is run as either a 5 ECTS module or a 10 ECTS module. The specific mix of elective courses is determined continuously. The elective subjects allow students to specialize their skills in a field of study of their choice. The elective subjects are published in an elective subject catalogue, which contains a description of each elective subject, their ECTS scope, learning objectives, compulsory participation requirements and test forms.

Elective course: PHP
Programme and semester: Bachelor's Degree Program in Web Development. 7th semester.
Theme: PHP
Course name: PHP
Course learning objective:
ECTS: 10 ECTS for each elective – total 20 ECTS
Course content: HTTP Request/Response Procedure, Language syntax, Expressions and Control Flow, Form Handling, PHP Functions, User defined Functions, PHP Arrays, Data manipulation and Data validation, Cookies, Sessions, and Authentication, Basic Object

Oriented Programming (Classes, Objects, inheritance), Advanced Object Oriented Programming (Polymorphism, interfaces, Abstract classes), Exception Handling, Laravel Framework, Interdisciplinary Project.

Knowledge

Upon completion of the course, students should have acquired knowledge about:

- Dynamic web content
- General PHP syntax and its usage in creating web applications
- Object Oriented PHP and its usage in creating web applications
- OOP and Procedural methods to manipulate the Database
- PHP Data Objects (PDO)
- MVC architecture
- At least one industry level PHP framework

Skills

Upon completion of the course, students should have acquired the skills to:

- apply the knowledge gained to create PHP based web applications
- create database driven dynamic web solutions
- implement user validation and data sanitization techniques in PHP
- create RESTful API
- use PHP frameworks to create MVC based web applications
- create MVC based web applications without using a framework

Competencies

Upon completion of the course, students should have acquired the competencies to:

- analyse and select the Framework best suited to create the application
- analyse and refactor the existing code to Object Oriented PHP
- produce scalable, secure and maintainable web application

Indhold:

The internship is organised in order to contribute, in combination with the other elements of the study programme, to the student's development of practical competencies. The purpose of the internship is to enable the student to apply the methods, theories and tools acquired during the course of the study programme in the solution of specific, practical tasks in web development.

The internship is finalised by examination. The learning objectives for the educational component are identical to the learning objectives for the examination. For the examination type and exam procedure, please see chapter 5.

Learning outcomes:

Knowledge

Upon completion of the course, students should have acquired knowledge about:

- daily operations in the whole of the internship host company.

Skills

- Upon completion of the course, students should have acquired the skills to:
- apply versatile technical and analytical working methods related to the occupation
- evaluate practical problems and propose possible solutions
- structure and plan daily tasks relevant to the occupation
- communicate and convey practical problems and issues and well-argued solution proposals.

Competencies

Upon completion of the course, students should have acquired the competencies to:

- manage the practical and discipline-related situations of the occupation
- acquire new knowledge, skills and competencies related to the occupation
- take a professional approach to professional and multidisciplinary collaboration with others.

Learning form: Traditional teaching 20% Group work 40% Projects 40%.

Confrontation hours: 66 lessons.

Examination:

Following are the eligibility requirements to take the exam:

A requirement for attending the exam is that the student has completed the compulsory study activities. The course teacher lays down the study activities in the semester plan.

Exam structure: The exam is an external, individual oral exam taking its point of departure in a question that the student draws at the exam. The exam comprises 30 minutes of preparatory time, and the examination time is 30 minutes, including evaluation and awarding of grades.

The performance will be assessed according to the 7-point scale.

3.5 Internship

Internship

8th semester.

ECTS: 15

Indhold:

The internship is organised in order to contribute, in combination with the other elements of the study programme, to the student's development of practical competencies. The purpose of the internship is to enable the student to apply the methods, theories and tools acquired during the course of the study programme in the solution of specific, practical tasks in web development.

The internship is finalised by examination. The learning objectives for the educational component are identical to the learning objectives for the examination.

For the examination type and exam procedure, please see chapter 5.

Learning outcomes:

Knowledge

Upon completion of the course, students should have acquired knowledge about:

- daily operations in the whole of the internship host company.

Skills

- Upon completion of the course, students should have acquired the skills to:
- apply versatile technical and analytical working methods related to the occupation
- evaluate practical problems and propose possible solutions
- structure and plan daily tasks relevant to the occupation
- communicate and convey practical problems and issues and well-argued solution proposals.

Competencies

Upon completion of the course, students should have acquired the competencies to:

- manage the practical and discipline-related situations of the occupation
- acquire new knowledge, skills and competencies related to the occupation
- take a professional approach to professional and multidisciplinary collaboration with others.

3.6 Regler for praktikkens gennemførelse

Krav og forventninger til praktikkens gennemførelse

I praktikken arbejder den studerende med fagligt relevante problemstillinger inden for uddannelsens kerneområder og opnår kendskab til relevante erhvervsfunktioner. Den studerende er under praktikken knyttet til en eller flere virksomheder. Praktikforløbet kan tilrettelægges fleksibelt og differentieret og kan danne grundlag for den studerendes afsluttende eksamensprojekt.

Praktikperioden er at sidestille med et fuldtidsjob med de krav til arbejdstid, indsats, engagement og fleksibilitet, som den færdiguddannede datamatiker må forventes at møde i sit første job.

I praktikperioden har den studerende en praktikvejleder fra uddannelsen og en kontaktperson i virksomheden. Med udgangspunkt i læringsmål for praktikken, jf. fælles del af studieordningen, fastlægger virksomheden og den studerende i fællesskab mål for den studerendes læringsudbytte af praktikperioden, som efterfølgende er retningsgivende for virksomhedens tilrettelæggelse af den studerendes arbejde.

Praktikperioden afsluttes med en praktikrapport.

Den studerende har selv ansvar for at finde en praktikvirksomhed og sikre, at praktikkontrakten er underskrevet af virksomheden, praktikkoordinatoren og den studerende, inden praktikken påbegyndes.

Den studerende skal senest to uger inde i praktikperioden have afleveret en praktikplan, inklusiv læringsmål for praktikken, til sin praktikvejleder.

Den studerende har under praktikken selv ansvar for at bidrage til at læringsmålene nås. Ved misforhold under praktikken er det den studerendes ansvar at orientere den tildelte praktikvejleder om dette, så der kan arbejdes på at finde en løsning.

Praktikkoordinatoren har til ansvar at introducere rammer og indhold i praktikken for de studerende. Praktikkoordinatoren har desuden ansvar for at indsamle praktikkontrakterne og godkende, at kontrakterne i deres udformning lægger op til en praktikperiode, hvorigennem læringsmålene kan nås.

Praktikvejlederen vil i praksis være den person, som den studerende henvender sig til, hvis vedkommende har spørgsmål, behov hjælp el.lign. Praktikkoordinatoren kan inddrages, hvis det bliver nødvendigt.

3.7 Ways of teaching and working

The tuition given at the Web Development 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 practice and theory. Relevant problems from different types of companies in the IT industry are included. The students must be responsible for own learning and both students and lecturers alike contribute constructively to the learning process.

In order to ensure optimum academic learning and personal development in each student, the Web Development programme applies various pedagogical approaches, with the main emphasis on dialogue, discussion and project work.

The tuition is given a variable structure and offers lessons in class, guest lecturers, company visits, project work in groups and individualised work – often in an interdisciplinary context and always focusing 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.

4 Internationalisation

The way the degree programme is structured, in the 7th 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 engage in summer schools abroad as an elective.

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

4.1 Examinations when studying abroad

The student must sit his/her exams at the partner institution abroad. The student must also document all learning 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 points awarded for the subject(s), although minimum three standard pages of 2400 characters for each page.

All assignment 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 the exams abroad have been taken. The portfolio, including the reports on the learning outcome, is given a Pass or a Fail.

EASJ awards 30 ECTS credits from the 7th 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”.

5 Exam forms

Below follows a description of the exam forms used throughout the education.

5.1 Examination schedule

You find the examination schedule in paragraph 3.1 and rules about the student's duty to attend tuition and requirements to written assignments and projects in paragraph 6.3.

5.1.1 Pre-conditions to enter exams

See the below descriptions of the pre-conditions to enter each exam.

Pre-conditions: Web Development

The student must meet the following conditions to attending the exam:

A condition for attending the exam is that the student has completed the project work covering Frontend and Backend.

Pre-conditions: Development Environments, Interface Design, Databases and Elective courses

The student must meet the following conditions to attending the exam:

A condition for attending the exam is that the student has completed the compulsory study activities. The study activities are laid down in the semester plan by the course teachers.

Pre-conditions: Internship examination

The student must meet the following conditions to attending the exam:

A condition for attending the exam is that the student has completed the internship period and handed in the following documents:

- The internship contract
- The internship plan
- The internship report.

Pre-conditions: Exam in The Bachelor Project

The student must meet the following conditions to attending the exam:

- All other exams in the education have been passed
- The internship has been passed.

5.1.2 Exam structure

See the below descriptions of the exam structures. The examination language is English or Danish depending on the student's preferences.

Exam structure: Web Development

Exam structure:

The exam is an external, oral exam taking its starting point in the group project work. The examination starts with a group presentation, where the group presents the result of the project work. After the presentation each student draws a question (Frontend or Backend depending on student's background) and is examined in the question. The students will be given all questions for the exam as a minimum one month before. The exam comprises 15 minutes for the group presentation, 20 minutes for individual examination and 5 minutes for evaluation and awarding of grade.

Assessment criteria:

The assessment criteria for the exam = the learning objectives for the compulsory educational elements: Web Development (Frontend / Backend).

ECTS: 10

Exam structure: Development environments

Exam structure:

The exam is an external, individual oral exam taking its point of departure in a question that the student draws at the exam. The exam comprises 30 minutes of preparatory time, and the examination time is 30 minutes, including evaluation and awarding of grades.

The performance will be assessed according to the 7-point scale.

Assessment criteria:

The assessment criteria for the exam = the learning objectives for the compulsory educational elements: Development Environments.

The learning objectives can be found in paragraph 3.2.

ECTS: 10

Exam structure: Interface Design

Exam structure:

The exam is an external, individual oral exam taking its point of departure in a question that the student draws at the exam. The exam comprises 30 minutes of preparatory time, and the examination time is 30 minutes, including evaluation and awarding of grades.

The performance will be assessed according to the 7-point scale.

Assessment criteria:

The assessment criteria for the exam = the learning objectives for the compulsory educational elements: Interface Design.

ECTS: 10

Exam structure: Databases

Exam structure

The exam is an external, individual oral exam taking its point of departure in a question that the student draws at the exam. The exam comprises 30 minutes of preparatory time, and the examination time is 30 minutes, including evaluation and awarding of grades.

The performance will be assessed according to the 7-point scale.

Assessment criteria:

The assessment criteria for the exam = the learning objectives for the compulsory educational elements: Databases.

ECTS: 10

Exam structure: Elective courses

<p>Exam structure:</p> <p>The exam is an external, individual oral exam taking its point of departure in a question that the student draws at the exam. The exam comprises 30 minutes of preparatory time, and the examination time is 30 minutes, including evaluation and awarding of grades. The actual implementation of the exam form will be described in the description of each elective course.</p> <p>The performance will be assessed according to the 7-point scale.</p>
<p>Assessment criteria:</p> <p>The assessment criteria for the exam = the learning objectives for the compulsory educational elements: Elective courses.</p>
<p>ECTS: 20</p>

Exam structure: Internship Exam
<p>Exam structure:</p> <p>The exam is internal, individual exam with an internal examiner. The counsellor evaluates the internship report together with the internal examiner.</p> <p>The report will be assessed according to the 7-point scale.</p>
<p>Assessment criteria:</p> <p>The internship report will be assessed according to the criteria listed in the common part. Further information can also be found in appendix 1 in the internship manual.</p>
<p>ECTS: 15</p>

Exam structure: The Bachelor Project
<p>Exam structure:</p> <p>The bachelor project is examined by an individual oral defence lasting approximately 30 minutes.</p> <p>The defence starts with a presentation of the project (10 min. for each student in a group). After the presentation, each student is questioned individually in an examination dialogue for approximately 20 min.</p> <p>A single grade is given to each student based on the project and the oral examination.</p> <p>The performance will be assessed according to the 7-point scale.</p>
<p>Assessment criteria:</p> <p>Assessment criteria</p> <p>The Bachelor Project will be assessed according to the criteria listed in the common part. Further information can also be found in the document "How to write a dissertation".</p>

The project report, which makes up the written element of the examination. We recommend that the project as a minimum contain the following:

- cover page with title
- contents
- introduction including problem statement
- research method
- analysis
- solution proposals
- conclusion
- reference list (including all sources that are referred to in the project)
- appendix (only including appendices that are central to the report).

ECTS: 15

5.1.3 Exams with external censorship

See paragraph 3.1.

5.2 Førsteårsprøven

Førsteårsprøven skal være bestået inden udgangen af den studerendes 2. studieår efter studiestart for at den studerende kan fortsætte uddannelsen.

Se henvisning til den gældende bekendtgørelse om prøver i erhvervsrettede videregående uddannelser i afsnit 1.2.

5.3 Requirements for written exams and projects

See the description of each exam in paragraph 5.

5.4 Requirements for the bachelor's project

ECTS credits

15 ECTS

Requirements for the bachelor's degree project

In the bachelor's degree project, the student must demonstrate the ability to process a complex, practise-related problem related to a specific web development task in an analytical and methodical way.

The problem statement, which must be central to the education and the profession, must be formulated by the student, in collaboration with a private or public company or business if possible. The educational institution must approve the problem statement.

The student must submit a project report and in some cases also a product. See also paragraph 5.1.3.

The maximum allowed length of the report is 20 standard pages + 20 standard pages per student. The cover page, table of contents, reference list and appendices are not included in the required number of pages. Appendices are not assessed. One standard page is 2,400 characters including spaces and foot notes.

Learning outcomes

The bachelor's degree project is to demonstrate that the student has achieved the expected level of graduate competence, please see Schedule 1 to Ministerial Order no. 353 of 7 April 2015 on the Bachelor's Degree Programme in Web Development.

Knowledge

Upon completion of the course, graduates should have acquired knowledge of:

- the formal and de facto standardisation of the World Wide Web
- the World Wide Web's standards as a platform for applications
- development environments for web development
- Content Management Systems
- the role of web applications in society and its development, and
- common development methods in web development, and graduates should be able to reflect on the suitability of such methods for different development scenarios.

Skills

Upon completion of the course, students should have acquired the skills to:

- plan and develop applications based on specific development requests
- evaluate and select a suitable programming language for the performance of development requests
- evaluate and select a suitable database system to ensure data and application persistence
- create user interfaces adapted to relevant target groups based on the theory and methods of the relevant subject area
- create user interfaces that make use of the World Wide Web's particular possibilities in terms of design and aesthetics
- prepare documentation – adapted to the target audience and to the extent of the project – of the functionality and development process of a project, and
- use a suitable development environment to perform the development process.

Competencies

Upon completion of the course, students should have acquired the competencies to:

- handle complex situations aimed for progression in web development
- take a professional approach to disciplinary and multidisciplinary collaboration with others.
- identify their learning needs and structure their learning in different learning environments.

Assessment

The examination is externally assessed and will be graded according to the 7-point grading scale.

The exam is made up of a project and an oral examination. The student will receive a single, joint grade for the written project and the oral examination. The exam cannot take place until the internship exam and the other exams of the study programme have been passed.

For the examination type and exam procedure, please see chapter 5.

5.4.1 Writing and spelling skills

Writing and spelling skills will be assessed as part of the assessment and grading of the final degree project. The assessment is expressed as an overall assessment of the professional and academic content as well as the student's spelling and writing skills.

Students may apply for an exemption from the requirement that spelling and writing skills form part of the assessment criteria if the application is supported by documentary evidence of a specific, relevant physical or mental impairment. The application should be submitted to the study programme and directed to the attention of the programme director not later than 4 weeks before the exam is to be held.

5.5 Aids permitted

Any rules limiting the use of aids can be found in the description of the individual exams.

5.6 Special exam arrangements

Students may apply for special exam conditions if warranted by physical or mental impairment. Applications must reach the programme at the latest four weeks before the examination date. Exemptions from the date of 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 certifying serious health issues or specific relevant functional impairment.

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

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

5.7 Re-examination

Illness examination

A student who was prevented from attending an exam due to documented illness or other unforeseeable reasons 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 illness exam can be identical with the next ordinary exam. It is up to the student to find out when the illness exam will take place. Information about time and place of illness exams can be found on the Intranet. Illness must be documented by a medical certificate. The educational institution must receive the medical certificate three workdays after the exam has taken place at the latest. 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. The student must bear the expenses of the medical certificate.

Re-examination

In the event of failure to pass an exam or non-attendance for an exam, the student is automatically registered for re-examination so long as he/she has attempts to do so. Re-exam can be identical with the next ordinary exam. It is up to the student to find out when the re-exam will take place. Information about time and place of re-exams can be found on the Intranet.

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

5.8 Tuition language and examination language

Tuition language

All tuition in the programme is in English. Knowledge of other foreign languages is not required.

Examination language

Exams can be conducted in English or Danish depending on the student's preferences.

5.9 Academic aptitude exam

There is currently no academic aptitude exam.

5.10 Cheating offences in exams

When submitting a written answer and/or report etc. the student certifies by his/her signature or through electronic submission that the submitted answer and/or report etc. has been produced 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 and/or report etc. is presented as if produced personally by the student(s), also if the answer and/or report

- comprises identical or almost identical repetitions of the wording or work of others, without clearly identifying this using quotation marks, italics, indentation or other clear indications stating the source, cf. the educational institution's requirements to written answers etc.
- 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 possible to determine that the text pieces could not have been written using any other sources
- comprises use of words or ideas of others without referencing these originators in an appropriate manner
- re-uses text and/or core ideas from the student's own previously assessed answers (self-plagiarism) etc. without observing the provisions laid down in the institution's own provisions concerning written answers, reports etc.

Presumed cheating at an exam, including plagiarism during and after the exam

If during or after an exam there is the presumption that a student

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

then this will be reported to the programme manager.

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, if the issue cannot 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 procedures for dealing with cheating offences and disruptive behaviour in exams

It is regarded as cheating and/or [what] when there is no doubt that a student during an exam:

- receives unauthorised help or
- helps another student answer a question at the exam or
- uses unauthorised materials and aids
- exhibits disruptive behaviour.

In the event of the above, the student can be expelled from the exam by the programme manager or who-ever the programme manager authorises to do so, or the examiners can agree to expel the student from the exam while taking place. In such cases the justification of the action is evaluated in connection with the subsequent decision. If the disruptive behaviour is less serious, the educational institution will initially issue a warning.

Penalties for cheating offences and disruptive behaviour during exams

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

If the disruptive behaviour is less serious, the educational institution will initially issue a warning. Expulsion according to the above terms will lead to cancellation of any marks that may have been granted for the exam concerned, and the exam will count as one attempt. The student cannot sit a re-examination and cannot sit the exam until the exam is scheduled on ordinary terms as part of the degree programme.

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.

5.11.4 Complaints about penalties

The decisions that an attempt at the exam has been used and expulsion due to a cheating offence at an exam are final and cannot be appealed to a higher administrative authority.

Appeals concerning legal aspects (such as incapacity, hearing, appeal instructions, correct or incorrect interpretation of the Examination Order etc.) can 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 appellant must be given an opportunity to comment on, 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 reach the educational institution no later than two weeks from the day that the appellant was notified of the decision, cf. section 51 of the Examination Order.

6 Other rules of the programme

6.1 Rules about attendance to tuition

See paragraph 6.3.

6.2 Credit transfer

Passed educational components are equivalent to corresponding educational components offered by other educational institutions providing the programme. The student has a duty to inform the educational institution about educational components that were studied and passed at other Danish or foreign higher education institutions and to inform about occupations that can be assumed to earn the student transfer credit. The educational institution will grant transfer credit in each individual case based on completed/passed educational components and occupations that match course units, parts of the study programme or parts of the internship. The decision to award transfer credit is based on an assessment of academic elements.

6.2.1 Pre-approved credit transfer

The student can apply for pre-approval of credit transfer. In cases of pre-approved credit transfer of studies in Denmark or abroad, the student is under a duty to document completion of the pre-approved educational components, upon completion of the study-abroad period. When applying for pre-approval, the student must consent

to allow the educational institution to collect any required information upon the student's completion of the study-abroad period.

For the final approval of pre-approved credit transfer, the educational component is considered completed if it is passed in accordance with the regulations applying to the study programme.

Credit transfer agreements

None.

6.2.2 Credit transfer for elective educational elements

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

Students must apply for credit transfer in advance if he/she wants credit transferred for educational elements not offered by the programme.

6.3 Rules about the student's duty to attend tuition and requirements to written assignments

Studying for a degree at EASJ 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 activities in the Web Development 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 host company for the internship is compulsory in the fifth semester, an internship logbook will be kept. The student must be able to document contact with a tutor in the 8th 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 tutor (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 having received the written notice, 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 future.

Compulsory assignments/conditions

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

The lecturer organises the compulsory assignments/conditions.

The lecturer inspects the students' attendance and hand-ins of compulsory assignments. A student may re-submit answers to compulsory assignments once.

The lecturer notifies the student counsellor and the programme manager of any assignments/conditions 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 meet for this.

Termination of enrolment

Enrolment with the studies may be terminated for students who have not been active students for a consecutive period of at least 12 months. Periods when the student has not been an active student due to leave, giving birth, adoption, documented illness or conscription will not be included. Upon request, the student must produce documentation substantiating these circumstances. The programme may make 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 these provisions. The notice to the student must state that within 14 days the student must 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 does 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 maintains the decision, the student may complain to the Ministry within two weeks of receiving the decision as regards the legal issue.

6.4 Exemptions

The educational institution may grant an exemption from the provisions of the curriculum that only are laid down by the institutions when warranted by unusual circumstances². The institutions work together to ensure uniform exemption practices.

6.5 Complaints about exams and appealing decisions³

Complaints about exams

The student is recommended to ask the student counsellor for guidance on appeal procedures and how to prepare an appeal. The rules governing complaints concerning 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
- 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 can submit a written complaint, stating his/her reasons, within two weeks after the assessment has been 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, and practical or clinical exams. The complaint is sent for the attention of 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.

² Consequently, an institution may not grant an exemption from provisions laid down by the executive orders, eg. the provisions that the internship must be assessed according to the 7-point scale or that all exams must be passed before the student may sit for the Final Exam Project.

³ See the Examination Order part 10: <https://www.retsinformation.dk/Forms/R0710.aspx?id=160839>

Immediately when the examiners' statement is 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 academic opinion presented by the examiners and the complainant's comments on the opinion. The decision, which must be in writing, stating reasons, can be as follows:

- an offer for a new assessment (re-assessment) – although only written exams
- an offer for a new exam (re-examination)
- 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, partly be-cause the review panel cannot make a (re-)assessment of an oral exam that has already been held and be-cause 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 complainant must be told that reassessment or re-examination may lead to a lower mark. Within a period of two weeks after the decision has been communicated, the student must accept the offer. Acceptance cannot be cancelled. 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 documentation of the matter must be made available to the review panel, viz the assignment and/or the questions, the answer(s), the complaint, the statements made by the original examiners with the complainant's comments and 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 re-assessment or re-examination, this decision applies to all students if the exam suffers from the same defects as those referred to in the complaint.

The complaint is sent to the programme manager two weeks (14 calendar days) at the latest after the assessment of the exam concerned has been communicated. If the due date is on a public holiday, the due date will be the first workday 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 submit the educational institution's decision to an appeals panel. The activities of the appeal panel are governed by the Public Administrations Act, this also includes incapacity and confidentiality. The appeal is sent to the programme manager.

Appeals must be submitted two weeks at the latest after the decision has been communicated to the student. The requirements as above for complaints (in writing, stating reasons etc.) also apply to appeals.

The appeal 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 appeal panel makes decisions based on the material that the educational institution used for its decision and the student's appeal, with reasons stated. The appeal panel considers the appeal and the decision may result in:

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

If the decision is to offer re-assessment or re-examination, the complainant must be told that re-assessment or re-examination may lead to a lower mark. Within a period of two weeks after the decision has been communicated, the student must accept the offer. Acceptance cannot be cancelled. 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 documentation of the matter must be made available to the review panel, viz the assignment and/or the questions, the answer(s), the complaint, the statements made by the original examiners with the complainant's comments and the educational institution's decisions.

The appeal panel must reach a decision at the latest two months – for summer exams three months – after the appeal has been submitted. Decisions of the appeal panel are final. This means that the matter cannot be brought before a higher administrative authority as regards the academic aspects of the appeal.

6.5.2 Complaints about legal matters

Complaints about legal aspects of decisions made by the review panel in connection with re-assessments or re-examinations or about decisions of the appeal panel can be brought before the student counsellor.

The deadline for submitting complaints is two weeks from the day the decision has been communicated to the complainant.

Complaints about legal aspects of decisions made by the educational institution pursuant to the rules laid down by the Examination Order (such as incapacity, hearing, correct or incorrect interpretation of the Examination Order etc.) can be submitted to the educational institution.

The educational institution issues a statement and the complainant is normally given one week for commenting.

The educational institution forwards the appeal, the statement and any comments that the complainant may have made to the Danish Agency for Higher Education and Educational Support. The educational institution forwards the complaint, the statement and the complainant's comments, if any, to the Agency.

Complaints must be submitted to the educational institution at the latest two weeks (14 calendar days) after the day when the decision was communicated to the complainant.

6.6 Økonomi

Alle aktiviteter der påføres den studerende skal betragtes som egenbetaling, med mindre andet er påført.