

Computer Science 1st semester

Programme:

AP Degree Programme in Computer Science

Semester:

1st semester of the programme.

Pre-requisites:

A foreign qualification similar to 1-2 years engineering, IT, SW or computer science studies (little or no knowledge of Java and SW-Design & UML).

Availability:

Autumn Semester: (end August – January)

Programme information for exchange (Learning Agreement):

For a detailed course description kindly refer to the programme curriculum found under programme information on <http://zibat.dk/curriculums-ordinary-programmes/>

Semester overview:

| <i>Study Programme at the Receiving Institution</i> | | | | |
|---|------|--|--|------------------------|
| Planned period of the mobility: from [month/year] to [month/year] | | | | |
| Before the mobility | | Component/course title (as indicated in the course catalogue) | Semester [e.g. autumn/spring; term] | Number of ECTS credits |
| | DCS1 | Software Construction (Mandatory) | Autumn | 15 |
| | DCS1 | Software Design (Mandatory) | Autumn | 15 |
| | | | | Total: 30 ECTS |

Web link to the course catalogue at the Receiving Institution describing the learning outcomes:

<http://zibat.dk/curriculums-ordinary-programmes/>

Semester and Course Description:

| Component code (if any) | Component title at the Receiving Institution (as indicated in the course catalogue) | Course Component Description | Available Semester | Number of ECTS credits |
|-----------------------------------|---|---|---------------------------|-------------------------------|
| DCS 1 | Software Construction (Mandatory) | <p>Introduction to programming Introduction to software and hardware Variables, operators, and expressions, Using classes and objects Creating objects, Using methods on objects, Defining classes, Method definitions Methods and scope, Decisions (If-statements), More Objects Iterations (Loops), Types and references, Arrays, foreach-loop, Encapsulation List/Dictionary, Enums and Collections Properties, Bindings, MVVM Design Pattern, Designing windows store apps with xaml MVVM Design Pattern, Version control (GitHub) Persistens, Files Exceptions, Interface, Inheritance, Unit Test Task, Thread, Async</p> | Autumn | 15 |
| DCS 1 | Software Design (Mandatory) | <p>Overview of Unified Process (UP) Class Diagrams, Sequence diagrams Quality factors and test Prototypes UP as a method, design principles, GUI UP: Business Modelling, Requirements, Domain Model(uml), Use Cases UP: Analyse and Design, Sequence Diagram (uml), Design Class Diagram (uml) More design patterns (Singleton, Observer), GUI-design/blend, Testing GUI</p> | Autumn | 15 |

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|--|--|---|--|--------------------------|
| | | Version Control Introduction to business modelling, The Canvas Model, SWOT, Porters 5 | | |
| | | | | TOTAL:30 ECTS |