

## Interaction Development: Construction and Modeling

Lecturer: Bjarne Slipsager (bsl@ats.dk)

Lessons: 82

Lessons in class: 55 = 11\*5

Lessons in Project: 27 (supervision, technical supervision)

Online Lectureplan: <http://www.slipsager.net/scripting2sem/>

### Lecture plan (9.00 – 13.30 )

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|-------|-----------|--|
| 28.01 | 5 Lessons | Pollock: Module 1 – 3<br>Programming, JavaScript Intro, Variables                                    |
| 29.01 | 5 Lessons | Pollock: Module 4 – 5<br>Functions, Operators  |
| 07.02 | 5 Lessons | Pollock: Module 6 – 7<br>Conditional Statements, Loops and Event handlers                            |
| 18.02 | 5 Lessons | Pollock: Module 8 – 10<br>Predefined Objects and the DOM   |
| 20.02 | 5 Lessons | Pollock: Module 13 – 14<br>Handling Strings and Numbers, Xhtml Forms                                 |
| 21.02 | 5 Lessons | Rosenzweig: Charter 1<br>Basic ActionScript 3.0  |
| 22.02 | 5 Lessons | Rosenzweig: Charter 2<br>ActionScript Game Elements  |
| 25.02 | 5 Lessons | Garrett: The Element of User Experience , Chapter 2-3<br>Application Modelling, Basic Game Framework |
| 06.03 | 5 Lessons | Rosenzweig: Charter 3<br>A Matching Game   |
| 10.03 | 5 Lessons | Rosenzweig: Charter 10<br>Trivia and Quiz Games, Semestertest (obligatorisk)                         |
| 14.04 | 5 Lessons | Rosenzweig: Charter 10<br>Trivia and Quiz Games, evaluering  |

### Literature:

John Pollock: "JavaScript – A Beginner's Guide second edition", McGraw-Hill

Gary Rosenzweig: "ActionScript 3.0 Game Programming University", Que

Jesse James Garrett: "The Elements of User Experience" , AIGA

## The plan

On this semester Interaction development is focused **client side scripting**. We start out with a 5 day introduction to the fundamental part of the scripting language JavaScript.

It is the intension that you shall use JavaScript in connection with the Case 1 project (calculation and form validation).

After this we will dive into ActionScript 3.0 that on the fundamental level are following the same rules as JavaScript. ActionScript is a great tool for developing more dynamic applications like games, and we will therefore analyze and modify some games, and in this connection learn about Object Oriented Programming.

It is the intension that you shall use some ActionScript in connection with the Case 2 project (Games elements in connection with Storytelling).

The subject System Development will focus on requirement specifications, modeling/structuring and testing, and will be required in the Case 1 and 2 projects.

### ***From the curriculum 2.semester***

Subject area: Interaction development

Subject: Construction and modelling (8 ECTS points)

Aim: The student must be able to structure, document and implement simple dynamic multimedia applications, including applications executed in a client/server environment. The student must obtain a basic understanding of system development and the importance of models in this connection.

The aim of the subject is divided into a number of overall topics:

*Simple dynamic multimedia applications :*

1. *Webpages with dynamic behavior (JavaScript) = HTML + CSS + JavaScript+DOM*
2. *Basic games made with ActionScript 3.0*
3. *Games/Applications with ActionScript3.0 and XML*

### ***System development***

The objective is that the student:

- Has knowledge of basic concepts within system development
- Understands the importance of using models in system development, and is able to model and document the static and dynamic structures of multimedia applications

*(Requirement specification, User scenarios, Class Diagrams, Commenting code and testing against specifications)*

### ***Construction***

The objective is that the student:

- Has knowledge of basic concepts within a programming paradigm
- Is able to construct dynamic multimedia applications by means of script language and programming
- Can use client/server interaction to handle a dynamic interaction between user and system

*Construction of Simple dynamic multimedia applications with JavaScript and ActionScript*