COURSE SYLLABUS
Web Development with JavaScript and DOM, 6 credits

Webbutveckling med JavaScript och DOM, 6 högskolepoäng

Course Code:	TWJK14	**Education Cycle:**	First-cycle level
Confirmed by:	Dean Apr 10, 2013	**Disciplinary domain:**	Technology (95%) and social sciences (5%)
Revised by:	Director of Education Dec 1, 2015	**Subject group:**	DT1
Valid From:	Jan 1, 2017	**Specialised in:**	G1F
Version:	2	**Main field of study:**	Computer Engineering
Reg number:	JTH 2015/4366-313		

Intended Learning Outcomes (ILO)

On completion of the course the students will be able to:

Knowledge and understanding
- display knowledge of the standards in HTML, XHTML, HTML5 and CSS
- demonstrate comprehension of the structure and functionalities in JavaScript and the Document Object Model
- demonstrate comprehension of how asynchronous JavaScript and XML (AJAX) enables the development of advanced web applications
- demonstrate comprehension of the limits in in web applications built with AJAX (e.g. regarding search engine optimisationand availability)

Skills and abilities
- demonstrate the ability to create HTML pages contaning images, tables, links, lists, etc. and applying CSS to change the pages' graphical layout
- demonstrate the ability to construct HTML forms and to process the content from such forms with JavaScript and regular expressions
- demonstrate the ability to detect client side shortcomings (browser version, resolution, etc.) and to adopt the page content thereafter
- demonstrate the ability to implement asynchronous data access with AJAX
- demonstrate the ability to build web applications using comming JavaScript libraries (e.g. JQuery, Prototype, Dojo) and frameworks for HTML/CSS layouts (e.g. Blueprint, 960 GS, etc.)
- demonstrate the ability to implement web applications complying to WCAG (Web Content Accessibility Guidelines)

Judgement and approach
- demonstrate the ability to compare and evaluate web applications with respect to functionality, availability and compatability

Contents

The course aims to give students a solid introduction to web development on the client side. We will go through the concepts and techniques used to design static and dynamic Web pages, some common reusable frameworks/libraries for the Web, and provide an introduction to how AJAX can be used with a server-based interface to produce advanced web applications.

The course includes the following elements:
- XML & HTML
- Cascading Style Sheets
- HTML/CSS frameworks
- JavaScript
- Document Object Model
- AJAX
- JavaScript libraries
- HTML 5

Type of instruction

Lectures, laboratory work and project work.

The teaching is conducted in English.

Prerequisites

General entry requirements and completion of the courses Object-Oriented Software Development, 12 credits and Relation Databases, 6 credits (or the equivalent).

Examination and grades

The course is graded 5,4,3 or Fail.

The grades in Project and och Examinations is weighted together and determine the final grade. The final grade is issued only when all course units have been passed.

Registration of examination:

Name of the Test	Value	Grading
Project	4 credits	5/4/3/U
Examination	2 credits	5/4/3/U

Course literature

The course literature is preliminary until one month before the course starts.

Titel: HTML5: Up and Running

Författare: Mark Pilgrim

Förlag: O'Reilly

ISBN: 978-0-596-80602-6