COURSE SYLLABUS
Applied Web Architecture, 15 credits

Tillämpad webbarkitektur, 15 högskolepoäng

Course Code:	TAWK17	**Education Cycle:**	First-cycle level
Confirmed by:	Dean Feb 1, 2017	**Disciplinary domain:**	Technology (95%) and social sciences (5%)
Revised by:	Director of Education Nov 9, 2021	**Subject group:**	TE9
Valid From:	Jan 1, 2022	**Specialised in:**	G1F
Version:	4	**Main field of study:**	Informatics

Intended Learning Outcomes (ILO)

After a successful course, the student shall

Knowledge and understanding
- be familiar with some common web application security issues.
- display an understanding for multitier architecture.
- display an understanding for the REST architectural style.
- demonstrate basic knowledge of data modelling and relational databases.
- demonstrate knowledge of the response- and request cycle on the internet.
- demonstrate knowledge of information design principles for hierarchical taxonomies.
- demonstrate knowledge and comprehension of systems integrations.

Skills and abilities
- demonstrate ability to develop basic web applications using server side programming and a relational database.
- demonstrate ability to use a version control system for collaboration on a web application project.
- demonstrate ability to install and configure a web server
- demonstrate skills in installing and configuring a content management system
- demonstrate skills in creating custom web templates for a content management system.

Contents

The course introduces the concept of multitier architecture as a model to create flexible web applications. It teaches the basics of object oriented programming, the fundamentals of relational databases including the SQL language and building of CMS solutions. Furthermore, the course explains the principles of web servers and how they can be configured to meet the developer's needs and how external systems can be integrated to a solution, including the utilization of REST API's. The course finishes with a group project with a focus on building a CMS solution using some of the latest technologies and also utilizing a distributed version control system.

The course includes the following elements:
- Basic Object-oriented programming (e.g. .NET)
- Relational databases and CRUD (e.g. SQL)
- Content management systems (e.g. Umbraco)
- Working with RESTful web services
- Working with GIT

Type of instruction

The course consists of lectures, laboratory work and project work.

The teaching is conducted in English.

Prerequisites

General entry requirements and completion of the course Client-side Programming, 15 hp (or the equivalent).

Examination and grades

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

Final grading of the course is made by averaging the various test. The final grade will only be issued after satisfactory completion of all assessments.

Registration of examination:

Name of the Test	Value	Grading
Written examination	5 credits	5/4/3/U
Laboratoy assignments	2.5 credits	5/4/3/U
Written and oral project presentation	5 credits	5/4/3/U
Assignments	2.5 credits	5/4/3/U

Course literature

Literature
The litterature list for the course will be provided 8 weeks before the course starts.

Title: Head First PHP & MySQL, A Brain-Friendly Guide
Author: Beighley, L & Morrison, M
Publisher: O'Reilly Media
ISBN: 9780596800802

Wordpress. (2016, 12 19). Theme Handbook: https://developer.wordpress.org/themes