



## COURSE SYLLABUS

# Server-side Web Development, 9 credits

*Programmering för webben, 9 högskolepoäng*

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|----------------------|-------------------|-----------------------------|---|
| <b>Course Code:</b>  | TPWK18            | <b>Education Cycle:</b>     | First-cycle level                         |
| <b>Confirmed by:</b> | Dean Dec 11, 2017 | <b>Disciplinary domain:</b> | Technology (95%) and social sciences (5%) |
| <b>Valid From:</b>   | Jan 1, 2018       | <b>Subject group:</b>       | DT1                                       |
| <b>Version:</b>      | 1                 | <b>Specialised in:</b>      | G1F                                       |
| <b>Reg number:</b>   | JTH 2017/5088-313 | <b>Main field of study:</b> | Computer Engineering                      |

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### Intended Learning Outcomes (ILO)

On completion of the course, the student should:

Knowledge and understanding

- display an understanding for three tier web architectures
- display an understanding for common web application security issues
- display knowledge of performance optimisation in web applications
- display knowledge of factors that differentiate web applications from traditional software systems, in particular concerning issues like standardisation, vendor/system lock-in, maintenance, and reusability

Skills and abilities

- display the ability to configure development, testing, and deployment environments for web applications
- display the ability to develop and deploy web applications

Judgement and approach

- display the ability to analyse and compare different technologies for web development (tools, frameworks, application servers, etc.)

### Contents

The course provides the student with a thorough introduction to server side web development. It introduces the concepts and technologies used to develop dynamic web applications, including common frameworks and application servers for web development. It also covers security and performance optimisation.

The course includes the following topics:

- Web programming architectures, patterns, and tools
- Application servers and frameworks
- Current web technologies
- Security concerns in web applications
- Server-side AJAX

- Testing, debugging, and optimizing web applications
- Advantages and disadvantages of web applications

### Type of instruction

The course will consist of lectures, lab work and project work.

The teaching is conducted in English.

### Prerequisites

General entry requirements and completed courses Object-Oriented Software Development 12 credits, Relational Databases 6 credits and Web Development with JavaScript and DOM 6 credits (or the equivalent).

### Examination and grades

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

The final grade for the course is based upon a balanced set of assessments.

Registration of examination:

| Name of the Test                 | Value       | Grading |
|----------------------------------|-------------|---------|
| Examination                      | 4.5 credits | 5/4/3/U |
| Laboratory work and project work | 4.5 credits | 5/4/3/U |

### Course literature

The literature list for the course will be provided one month before the course starts.

Title: Pro ASP.NET MVC 5

Author: Adam Freeman

Publisher: Apress

ISBN: 978-1-4302-6529-0

Pro ASP.NET 3.5 in C# 2008: Includes Silverlight 2

Matthew MacDonald, Mario Szpuszta

Apress, 2009

Beginning ASP.NET 3.5 in C# 2008: From Novice to Professional, Second Edition

Matthew MacDonald

Apress, 2007

E-bok: <http://proquestcombo.safaribooksonline.com/9781590598917>