Linnæus University

Course syllabus

Faculty of Technology
Department of Media Technology

4ME110 Den adaptiva och semantiska webben, 7,5 högskolepoäng
Adaptive and Semantic Web, 7.5 credits

Main field of study
Media Technology

Subject Group
Media Production

Level of classification
Second Level

Progression
A1F

Date of Ratification
Approved 2011-11-25
Revised 2013-12-19 by Faculty of Technology. Course Evaluation and Prerequisites are revised.
The course syllabus is valid from autumn semester 2014

Prerequisites
30 credits, at the A1 level in Media Technology or equivalent.

Objectives
The aim of this course is to offer students knowledge and in depth understanding of advance methods and approaches related to the use of modern information retrieval and adaptive mechanisms for web-based content, as well as semantic web technologies.

Upon completion, the student should:

- have a good understanding of different methods for data mining and information retrieval on the web
- have a good understanding of different approaches for gathering, deriving and applying intelligence mechanisms to web based data and content
- understand the principles underlying semantic modeling of information and how they can be used for automation, integration, and reuse across web applications
- understand different development frameworks for deploying adaptable web applications and services
- be able toimplement a prototype web application that makes use of adaptive and semantic mechanisms for providing rich user experiences.

Content
The course comprises of the following topics:

- An overview of relevant concepts and approaches for structuring, modeling, mining and retrieving of data and information on the web.
- Different approaches and techniques for harnessing intelligence to transform web applications from being content-centric to user-centric services.
- Different approaches and technologies for designing and developing semantic web applications.
- Prototype implementation and deployment of a web application that offers a more targeted and personalized experience for each user.

Type of Instruction
Lectures, seminars and supervision.

Examination
The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).
On request, students may have their credits translated to ECTS-marks. Such a request must be sent to the examiner before the grading process starts.

The mark will be based on the quality of the process, including seminars, supervision and progress reports, and the quality of the product, in the form of a report and the oral presentation and defense of this report. The student is also required to be active as opponent to some other student report.

Course Evaluation
A course evaluation will be carried out and compiled after the course is completed. The compilation will be presented to the current board as well as to the students and filed.

Other
Upon request, a Swedish University course certificate will be awarded upon successful completion of the course.

Required Reading and Additional Study Material
Required Reading
Marmanis, H. and Babenko, D. (2009) *Algorithms of the Intelligent Web*. Manning Publications. Grenwitch (USA) 368 (368) pages

Yu, L. (2011). *A Developer's Guide to the Semantic Web*. Springer-Verlang, Berlin (Germany). 628 (500) pages

DFM distributed materials 150 pages

Recommended literature
Alag, S. (2008). *Collective Intelligence in Action*. Manning Publications. Grenwitch (USA)

Russell, M. (2011). *Mining the Social Web: Analyzing Data from Facebook, Twitter, LinkedIn, and Other Social Media Sites*. O'Reilly Media, Sebastopol, CA (USA)

Hebeler, J., Fisher, M., Blace, R., Perez-Lopez, A. and Dean, M. (2009) *Semantic Web Programming*. Wiley Publishing, Indianapolis, IN (USA)