Linnæus University

Course syllabus

Faculty Board of Science and Engineering
School of Computer Science, Physics and Mathematics

2ME107 Intelligenta multimediala system, 7,5 högskolepoäng
Intelligent Multimedia Systems, 7.5 credits

Main field of study
Media Technology

Subject Group
Media Production

Level of classification
First Level

Progression
G2F

Date of Ratification
Approved by Organisational Committee 2009-09-08

The course syllabus is valid from spring semester 2010

Prerequisites
Knowledge within the filed of Database Theory (1DV013), and Database Desig (1IK013) or the equivalent.

Expected learning outcomes

Upon completion of the course the student should:

- understand the principles of the dynamic handling of XML documents that are used to describe multimedia objects
- know how to process and master server side programming techniques that allow the dynamic generation of XML objects to be used on the Web
- understand the principles behind the design and implementation of Web 2.0 applications that combine data from a variety of web mash-ups
- be able to apply machine learning techniques for filtering and clustering data from different sources to build new web applications. be able to discuss relevant aspects of future development of intelligent multimedia systems with the support of XML related technologies, artificial intelligence and multimedia technologies.

Content

The topics to be explored in the course are as follows:

- W3C-technolgies XML, SVG, SMIL, KML and MPEG
- Server side programming using PHP for the dynamic generation of XML-based multimedia objects

- Social computing
- Web 2.0 technologies
- Remixing data and web services
- Artificial Intelligence (AI) & machine learning
- Algorithms for filtering and clustering @@Application of AI-techniques for processing web based information
- Architecture and design of intelligent multimedia systems.

Type of Instruction

Campus course are based mainly on lectures, seminars, tutorials and practical work. For distance course, the communication is conducted through via conference and a learning management system over the Internet. Practical work is conducted individually or in groups. Attendance is mandatory for some sessions.

Examination

The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).
Assessment of students' performance is conducted by means of compulsory assignments and a final written report.

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.

Course Evaluation

A written course evaluation will be carried out at the end of the course in accordance with the guidelines of the University. The course evaluation will be filed at the department.

Required Reading and Additional Study Material

Required reading

Yee, R., *Pro Web 2.0 Mashups: Remixing Data and Web Services*, Apress, (2008). Pages 250 (600).

Segaran, T., *Programming Collective Intelligence: Making Sense of Big Data*, O'Reilly, (2007). Pages 100 (358).

DFM, *Webbaserat material*, Linnæus University, current year. Pages 200.

Recommended supplementary reading

Feng, D, Siu, W., & Zhang, H., *Multimedia Information Retrieval and Management: Technological Fundamentals and Applications*, Springer-Verlag, (2003). Sidor 80 (476).