Mittuniversitetet
MID SWEDEN UNIVERSITY

Course Syllabus:

Computer Engineering BA (C), Web Services, 7.5 credits

General data

Code	DT117G
Subject/Main field	Computer Engineering
Cycle	First cycle
Progression	C
Orientation (name)	
Credits	7.5
Progressive specialisation	G2F , First cycle, has at least 60 credits in first-cycle course/s as entry requirements
Answerable department	Department of Information and Communication Systems
Adapted	2007-03-15
Established	2007-06-20
Date of change	2013-07-11
Valid from	2013-08-15

Aim

Web services make it possible for computer programs to communicate with each other across application, operating system, hardware and organizational boundaries via XML documents and open standard Internet protocols. This course covers the basic standards that enable web services: XML Schema, SOAP, WSDL, and UDDI. It describes proper design of web services and applications that use them within a service-oriented architecture. Programming techniques for implementation of web services are demonstrated and worked with, including coverage of tools for developing web services in the Java/J2EE environment and Windows/.NET. The roadmap and motivation of future web services standards is laid out. Within the course the students will build a web service project and present it within the end of the course.

Course objectives

After the course the student will know to:
- understand and evaluate scientific articles, thesis and technical reports related to the area of SOAP-based web services and XML,
- use XML and XSL/T to create a working surrounding for a web service or a similar support system,
- use XML parser for different languages such as Java, PHP and Perl,
- use SOAP and WSDL for publishing web services,
- compare and manage publishing of web services on different application servers, and
- carry out specifications, design and evaluation of information systems for public interactive e-services.

Content

- XML, XSL/T
- XML parsed with Java, Perl and PHP
- Java Servlets
- Various platforms for publishing web services and support systems
- SOAP, WSDL and UDDI
- Design and evaluation of SOAP based web services
- Mid Sweden University research project, thesis reports and research publications related to the area of SOAP, WSDL, UDDI, XML and web services.

Entry requirements

Computer Engineering BA (A), 30 credits, including the course Computer Networks, 7.5 credits, and Introduction to .NET, 7.5 credits. Computer Engineering BA (B) 15 credits including courses Java II, 7.5 credits and Web Programming, 7.5 credits. Mathematics BA (A) 15 credits, including the course Discrete Mathematics, 7.5 credits.

Selection rules and procedures

The selection process is in accordance with the Higher Education Ordinance and the local order of admission.

Teaching form

The teaching consists of about 16 hours of lectures and about 16 hours of laboratory exercises, as well as 4 hours supervision of the project per a student. The rest of the total of 200 hours for the course is dedicated to self studying without supervision. This includes the time necessary to prepare student's presentations, reading of articles, laboratory exercises, homework assignments, work on the project and writing of reports. In case of a change of resources this can be changed.

Examination form

3.0 credits T101: Theory (homework assignments, laboratory exercises, project proposal, attendence)
Grades: Pass (P) or Fail (F)

4.5 credits, P101: Project, including oral and written presentation.
Grade: A, B, C, D, E, Fx and F. A-E are passing grades, Fx and F are failing grades.

Grading system

The grades A, B, C, D, E, Fx and F are given on the course. On this scale the grades A through E represent pass levels, whereas Fx and F represent fail levels.

Course reading
Required literature