

Mastering the World-Wide Web (A348/A548)

Succession of topics and homework assignments is presented below. For each week there is a lab (115 minutes) which is mostly a learning experience with a mild testing component. Exams test homework assignments & are closed-book.

Week 1	Introduction to Unix. Installation of the Apache web server.
Week 2	Basic management and maintenance of Apache. Overview of HTML, more Unix and introduction to Perl.
Week 3	CGI programming. The Perl CPAN CGI.pm module. Keeping state on client side (in the browser, using hidden fields).
Week 4	Basic HTTP. Setup of a password protected folder in Apache.
Week 5	Introduction to Relational Databases and SQL. Installation of the MySQL server. Methodology of design for relational databases.
Week 6	Installation of the PHP Apache module. Introduction to PHP. Keeping state on server-side using sessions.
Week 7	Implementation of a session mechanism for CGI using MySQL and the DBI.pm CPAN module for Perl.
Week 8	Midterm written exam and midterm practical exam.
Week 9	PHP database access. Finite state machines for the web.
Week 10	Javascript and Dynamic HTML (DHTML)
Week 11	Introduction to Java. Server-side Java programming: servlets and JSP. Installation of the Apache Tomcat web server.
Week 12	Java database access (JDBC).
Week 13	AJAX with OpenLaszlo and Apache Tomcat (server-side Java).
Week 14	Other popular systems: Ruby on Rails, Jakarta Struts, ASP.NET 2.0
Week 15	Final review. Wrapping up semester projects: demos/highlights.
Final Exam	Semester projects are turned in via individual appointments this and the preceding week. Final Exam includes a question or two about the project as turned in person, during the individual appointment.

Final grades will be calculated as follows:

Homework Assignments (7)	20%
Lab Assignments (10-12)	15%
Midterm Written Exam	15%
Midterm Practical Exam	15%
Semester Project	15%
Final Exam	15%
Minute Papers (collected every lecture)	5%

Homework and lab assignments evenly cover the topics listed above.

Semester projects are to be specified very early in the semester. A fairly detailed plan should be posted on the student's website by week 3. Students are required to keep a blog documenting their development of the project. Implementation work starts usually 4 weeks into the semester and ends during the "dead week". Students make appointments to orally present and defend their projects on an individual basis during the last week of classes and/or the week of the final exam. Final exam contains customized questions about each student's project defense.

The grading scale that will be used for letter grades:

0-54	55-65	66-67	68-69	70-75	76-77	78-79	80-85	86-87	88-89	90-95	96-100
F	D	D+	C-	C	C+	B-	B	B+	A-	A	A+