

# LIS651

## Active Web Site Architecture

2005–10–10

See the course web site at <http://openlib.org/home/krichel/lis651p05a> for the latest online version of this file.

### Course Description

This course focuses on the construction of active web sites. Such web sites change contents depending on what the user does with them. Many times, such sites involve users filling in a form, which is then processed. For an example, think of a query in a web-based library catalog. But active sites may also be as simple as saying "Merry Xmas" before 25 December, and leave it out afterwards. Students will learn how build simple active web sites. There are two aspects to this process. The first is the information itself. It is usually held in relational databases. The course therefore studies relational databases. It introduces the mySQL database software. The second aspect is the interface between the data in the database and the web. This is achieved with a procedural computing language. The course studies PHP, a purpose-built language for active web sites.

### Course objectives

After taking this course the students

- will be able to interact with a UNIX based server for the construction of active web sites;
- will have seen all of the form elements of HTML;
- will understand fundamental concepts of computer programming, such as variables and functions;
- will have a basic grounding in PHP that allows them to build PHP-based sites;
- will have elementary knowledge of SQL that will allow for simple database management.

Finally, in the last class, students will build their own Linux servers on machines that they may bring along.

### Prerequisites

Student normally must have passed LIS650 before taking this course. Students who wish to qualify for an exeption should contact the instructor prior to registering.

### Instructor

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### Class structure

Classes will be held in computer lab of the IPalmer School, normally on Sundays between 12:00 and 17:00. The first two classes, however, are exeptions. The first class will be taught by Angela Cornwell and run from 15:00 to 20:00, and be followed by a Vachin Mont-d'Or cheese and whine reception. The second class will run 12:00 to 17:00, but on a Saturday.

Each class will have a lengthy presentation by the instructor. For some small part of class time the students will work directly with their computers under the supervision of the instructor. However, given the hefty weight of the class material, students are expected to do much of the work on the web site at home.

Class details:

(100)(1) 0	2005-10-23	15:00 to 20:00	getting and gathering data	
1	2005-10-29	12:00 to 17:00	storing data with MySQL, more on PHP	
2	2005-11-06	12:00 to 17:00	PHP MySQL functions and PHP data structures	
3	2005-11-13	12:00 to 17:00	PHP sessions and functions	
4	2005-11-20	12:00 to 17:00	fun with PHP and MySQL	Slides for all classes are
5	2005-12-04	12:00 to 17:00	Debian install fest	

downloadable from the course web site.

### Readings

PHP is documented on its web site at <http://www.php.net> that students will probably find all gobbledigook when they first look at it. Most books on PHP also cover some relational database theory and practice. Students may find Ullman (2004) as reasonably priced introductory books on the topics of the course.

The instructor found that Lea, Choi, Kent, Prasad, and Ullman (2001) is an introduction that is probably suitably paced for the beginner. Meloni (2000) receives favorable reviews as a beginners' book.

### Assessment

Before each class except the first and second, there will be a quiz on the issued covered in the previous class. The average of all the quiz results will count for 40% of the assessment. For the third class meeting, the students will prepare a one-page web site that will state web site that they want to build. This statement should cover both the purpose of the web site and the site's architecture. The assessment of this statement will not count for assessment. The remaining 60% will be assessed through the final web site.

### Mailing list

There is a mailing list for the course at <https://lists.liu.edu/mailman/listinfo/cwp-lis651-krichel>. All students are encouraged to subscribe. As a rule, answers to email sent to the instructor will be copied to the list. There are exceptions to this rule

- if the question writer requests the answer not to be posted
- if the question is a purely private matter

### Students

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### References

Lea, Chris, Wankyu Choi, Allan Kent, Ganesh Prasad, and Chris Ullman (2001). *Beginning PHP 4*. Wrox Pres.

Meloni, Julie C. (2000). *PHP Essentials*. Prima Publishing.

Ullman, Larry (2004). *PHP for the World Wide Web: Visual QuickStart Guide, 2nd Edition* (2nd ed.). Peachpit Pless.